http//www.zenithservice.com

zenith

SERVICE MANUAL

Product Type:	LCD Projection TV
Chassis:	MB-042B
Manual Series:	
Manual Part #:	
Model Line:	
Product Year:	2004

Model Series:

M52W56LCD

CONTENTS

Product Specifications 4
Description of Controls 5
Adjustment Instructions.....12
Diagrams 29
Parts List 31
Schematics.....

Published Nov. 2004
by Technical Publications
LG Electronics USA, Inc.
201 James Record Road,
Huntsville, Alabama 35824-1513

Copyright © 2004 by LG Electronics U.S.A., Inc.

Printed in Korea

PRODUCT SAFETY

IMPORTANT SAFETY NOTICE

This manual was prepared for use only by properly trained audiovisual service technicians. When servicing this product, under no circumstances should the original design be modified or altered without permission from Zenith Electronics Corporation. All components should be replaced only with types identical to those in the original circuit and their physical location, wiring, and lead dress must conform to original layout upon completion of repairs. If any fuse (or Fusible Resistor) in this TV receiver is blown, replace it only with the factory specified fuse type and rating. When replacing a high wattage resistor (Oxide Metal Film Resistor, over 1W), keep the resistor 10mm away from PCB. Always keep wires away from high voltage or high temperature parts.

Special components are also used to prevent shock and fire hazard.
These components are indicated by the letter "x" included in their component designators and are required to maintain safe performance. No deviations are allowed without prior approval by Zenith Electronics Corporation. Service work should be performed only after you are thoroughly familiar with these safety checks and servicing guidelines.

Circuit diagrams may occasionally differ from the actual circuit used.
This way, implementation of the latest safety and performance improvement changes into the set is not delayed until the new service literature is printed.

CAUTION: Do not attempt to modify this product in any way.
Never perform customized installations without manufacturer's approval.
Unauthorized modifications will not only void the warranty, but may lead to property damage or user injury.

GENERAL GUIDANCE

An Isolation Transformer should always be used during the servicing
of a receiver whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating to protect against personal injury from electrical shocks. It will also protect the receiver and its components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

Before returning the receiver to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, etc., to be sure the set is safe to operate
without damage of electrical shock.

LEAKAGE CURRENT COLD CHECK (ANTENNA COLD CHECK)

With the instrument's AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs. Place the AC switch in the on position, connect one lead of ohm-meter to the AC plug prongs tied together, and touch other ohm-meter lead in turn to each exposed metallic parts such as antenna terminals, phone jacks, etc. If the exposed metallic part has a return path to the chassis, the measured resistance should be between 1MΩ and 5.2MΩ. When the exposed metal has no return path to the chassis the reading must be infinite. Any other abnormality that exists must be corrected before
the receiver is returned to the customer.

ELECTROSTATICALLY SENSITIVE DEVICES

Some semiconductor (solid-state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on the body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as an ESD mat, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise, seemingly harmless motion, such as the brushing together of your clothing or the lifting of your foot from a carpeted floor, can generate static electricity sufficient to damage an ES device.)

REGULATORY INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna; Increase the separation between the equipment and receiver; Connect the equipment into an outlet on a circuit different from that to which the receiver is connected; Consult the dealer or an experienced radio/TV technician for help.

The responsible party for this device's compliance is:

LG Electronics U.S.A., Inc.
1000 Sylvan Avenue
Englewood Cliffs, NJ 07632, USA
1-201-816-2000

TABLE OF CONTENTS

SPECIFICATIONS.....4

DESCRIPTION OF CONTROLS.....5

ADJUSTMENT INSTRUCTION.....12

PRINTED CIRCUIT BOARDS.....18

BLOCK DIAGRAM.....29

EXPLODED VIEW.....30,32

EXPLODED VIEW PARTS LIST.....31,33

REPLACEMENT PARTS LIST.....34

SCHEMATIC DIAGRAM.....

SPECIFICATIONS

Product Specifications

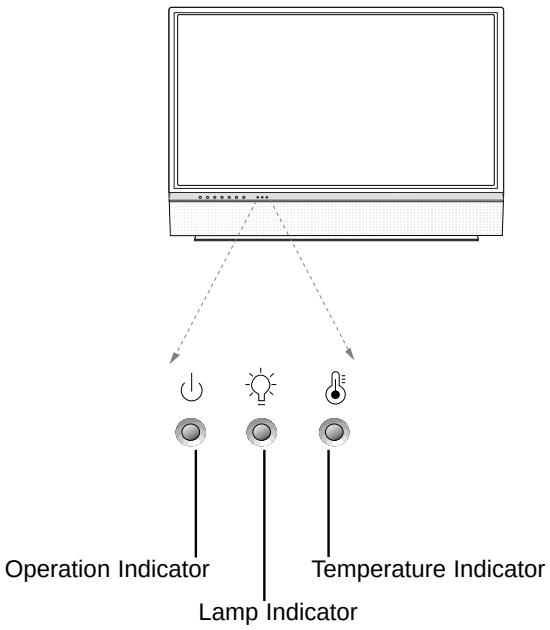
M52W56LCD	Horizontal Size (Inches)	47.5
	Height (Inches)	33.8
	Depth (Inches)	15.7
	Weight (lbs.)	66.1
Power Requirement	AC 120V, 60Hz	
Television System	American TV Standard, NTSC, ATSC with STB	
Television Channels	VHF: 2 - 13 UHF: 14 - 69 CATV: 1 - 125	
Power Consumption (W)	220W	
Antenna	75 ohm External Terminal for VHF/UHF	
Audio Output (W)	12W x 2	
Supplied Accessories	Remote control, 2 size AA batteries, 2 filters.	
External Input/Output Ports	A/V input (3 set) A/V output (1 set) S-Video input (2) Component input (2 set) RGB input (1) DVI input (1) RGB/DVI audio input (1 set) Variable audio output (1 set) Audio center mode input (1) Calibration port (1)	

Design and specifications are subject to change without prior notice.

DESCRIPTION OF CONTROLS

Function Status Indicators

Lamp indicator, operation indicator, and temperature indicator located below the front panel controls, reveal the operating status of the LCD projection TV.

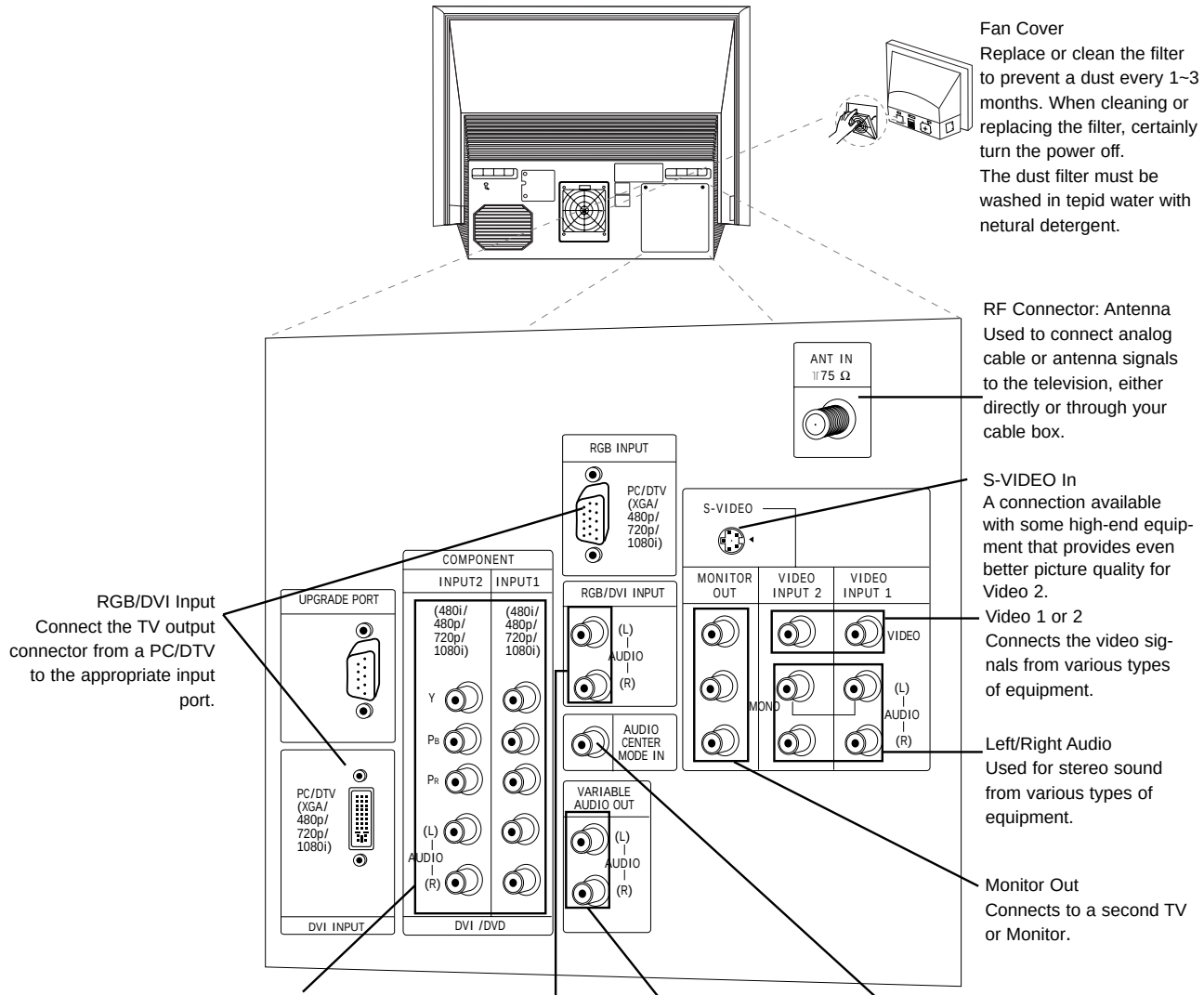


Operation Indicator	Off	Power cord is not connected.
	Red	Power Cord is connected, TV is in standby mode.
	Green	TV turns on.
	Orange (flashing)	Preparing operation in standby mode.
Lamp Indicator	Orange	Projection lamp is reaching the end of its life and needs to be replaced with a new lamp. Contact your service center.
	Red (flashing)	There is a problem with the lamp or around it. Contact an authorized service center.
	Green (flashing)	The lamp cover is not closed.
Temperature Indicator	Orange	The projection TV is overheating. Check the blocked vents of the projection TV and the accumulated dust in the dust filter.
	Red	The projection TV shut down due to overheating.
	Red (flashing)	The projection TV shut down, check the cooling fan. Contact your service center.

DESCRIPTION OF CONTROLS

Rear Connections Panel

Connecting cables and external equipment to your TV.



Fan Cover
Replace or clean the filter to prevent a dust every 1~3 months. When cleaning or replacing the filter, certainly turn the power off.
The dust filter must be washed in tepid water with netural detergent.

RF Connector: Antenna
Used to connect analog cable or antenna signals to the television, either directly or through your cable box.

S-VIDEO In
A connection available with some high-end equipment that provides even better picture quality for Video 2.

RGB/DVI Input
Connect the TV output connector from a PC/DTV to the appropriate input port.

Video 1 or 2
Connects the video signals from various types of equipment.

Left/Right Audio
Used for stereo sound from various types of equipment.

Monitor Out
Connects to a second TV or Monitor.

Component Input 1-2
Connect a component video/audio device to these jacks. Refer to your DVD manual for further information.

RGB/DVI Input
Used for audio connections from a PC source or HD-STB Satellite system.

Variable Audio Out
Used to connect either an external amplifier, or add a sub-woofer to your surround sound system.

Audio Center Mode In
Connect to external Dolby Digital Center “preamp output.”

DESCRIPTION OF CONTROLS

Side Connection Panel

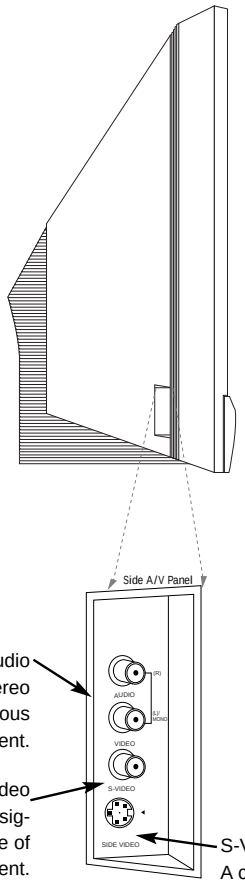
There are four jacks on the left side on your projection TV that make connecting Audio/Video devices like video games and camcorders very simple.

The jacks are like those found on the back jack connection panel. This means that most equipment that connects to those types of jacks on the rear jackpack, may be connected to the side connection panel.

To use the side jacks as the signal source, select them using Main Input menu as described on page 25. They will be named “Side Video” in the Main Input menu.

If you input both Side Video and S-Video, only the S-Video will work.

If you’re connecting a video game device, make sure to change the picture settings with the EZ Picture option in the Video menu.



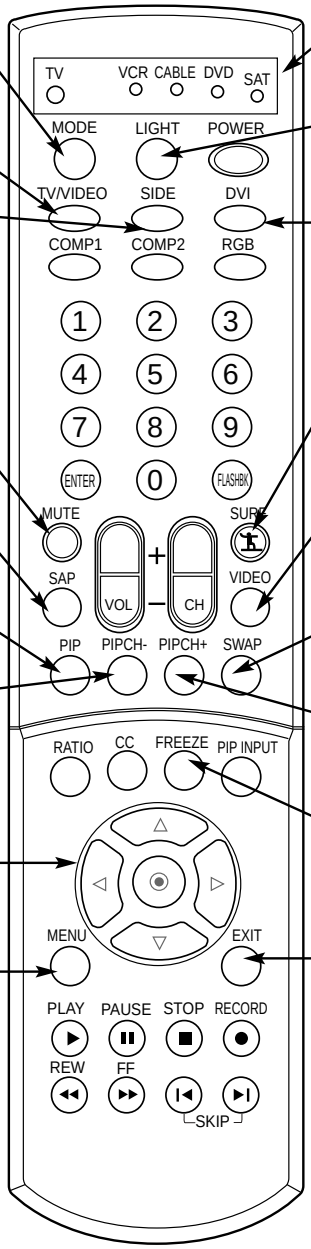
Left/Right Audio
Used for stereo sound from various types of equipment.

Video
Connects the video signals from any piece of equipment.

S-Video
A connection available on some very high-end equipment that provides better picture quality than video input.

DESCRIPTION OF CONTROLS

Remote Control Functions in TV Mode



MODE
Selects the remote operating mode: TV, VCR, Cable, DVD and Satellite. Select other operating modes, for the remote to control external devices.

TV/VIDEO
Selects: Analog, Video1, Video2, Side video, Component1-2, RGB, and DVI input sources.

SIDE
Selects the side video signal if a device, such as a camcorder or game player, is connected to the side video input jack.

MUTE
Switches the sound on or off

SAP
Selects: Mono, Stereo, and SAP.

PIP
Toggles between PIP, POP (Picture-out-of-Picture) and Twin picture mode.

PIPCH-
Changes to next lower PIP channel

THUMBSTICK
Allows you to navigate the on-screen menus and to adjust the system settings and preferences, by moving to an option with◄ ▲▼ ►and selecting the highlighted option with◎.

MENU
Brings up the main menu to the screen.

INDICATOR LIGHTS
Show active remote mode every time any button is pressed.

LIGHT
Illuminates the remote control keys.

DVI
Selects: DVI-DTV and DVI-PC input sources.

SURF
Scrolls the Surf channel list.

VIDEO
Adjusts the factory preset picture according to the room.

SWAP
Switches the picture from PIP, POP, or twin picture to the main screen.

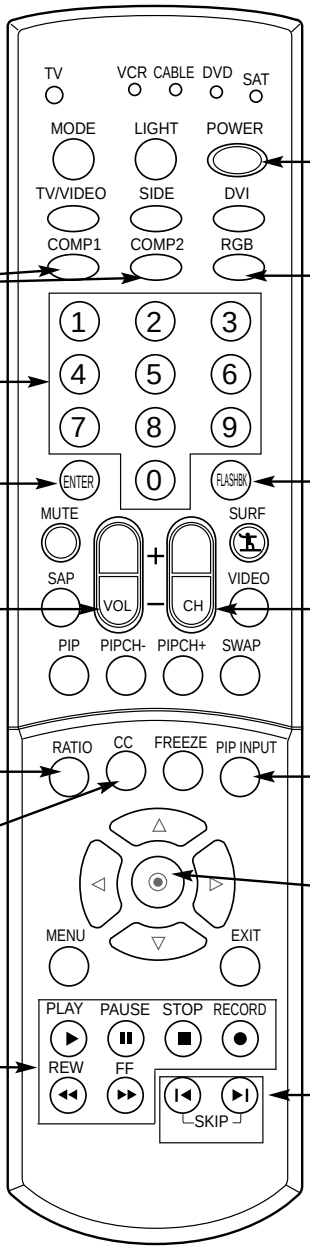
PIPCH+
Changes to next higher PIP channel.

FREEZE
Captures and freezes the currently-viewed main picture in PIP mode.

EXIT
Clears all on-screen displays and returns to TV viewing from any menu.

DESCRIPTION OF CONTROLS

Remote Control Functions in TV Mode



POWER
Turns your TV or any other programmed equipment on or off, depending on mode.

COMPONENT 1, 2
Selects component signal sources, such as DVD or HD receiver.

RGB
Selects: RGB-DTV and RGB-PC input sources.

NUMBER KEYPAD
For direct channel selection and programming functions.

ENTER
When in the menu system and other on-screen displays, selects highlighted options.

FLASHBK
Tunes to the last channel viewed.

VOLUME UP/DOWN
Increases/decreases the sound level.

CHANNEL UP/DOWN
Scrolls through available channels in EZ Scan memory.

RATIO
Changes the screen format or aspect ratio.

PIP INPUT
Selects the input source for the sub picture.

CC
Selects a closed caption mode for displaying captioning information if available on program.

ENTER
When in the menu system and other on-screen displays, selects highlighted options.

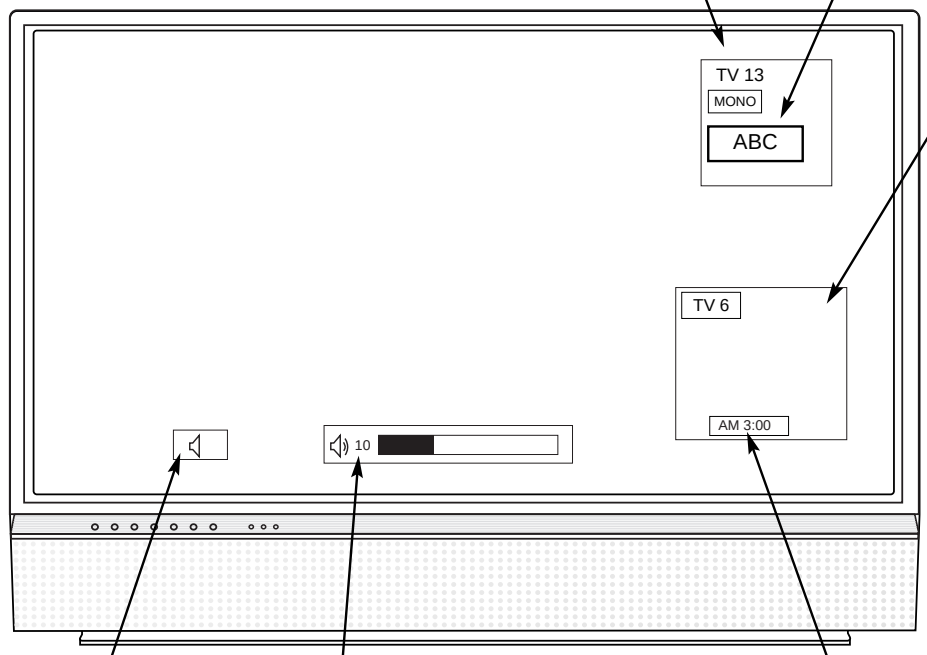
RECORD, PAUSE, REW, FFWD, PLAY, STOP
Control the functions on your VCR.

SKIP
Playing CDs: Selects songs.
Playing DVDs: Selects movie chapters.

DESCRIPTION OF CONTROLS

On-Screen Displays

This page describes your on-screen display and information banner options.



Main Channel Display
Displays current channel number.

Channel Label
If a channel label has been set, then it will appear here.

PIP Display
This display appears when PIP is active.

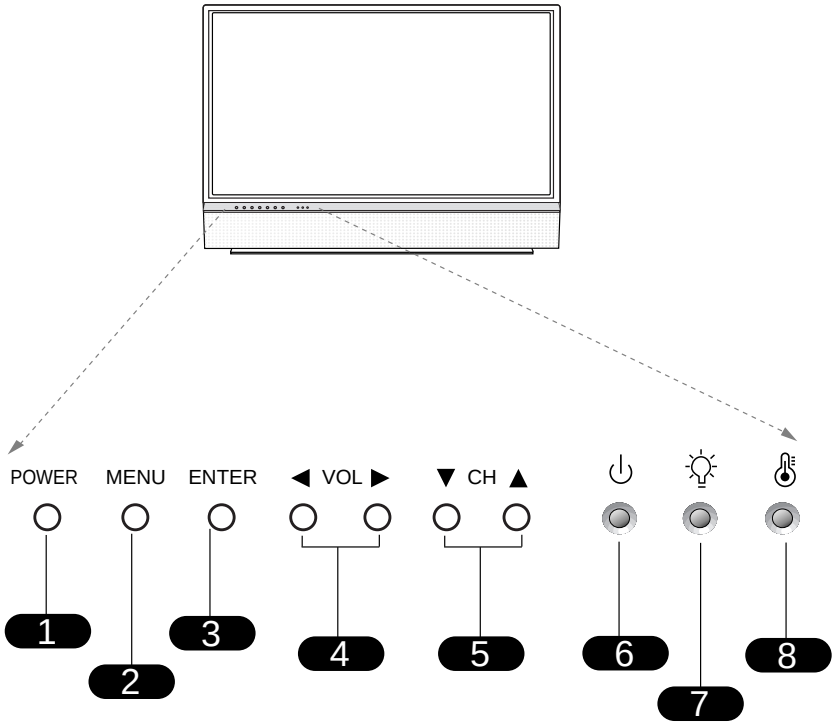
Mute
Appears when sound is muted.

Volume
Volume level is displayed while adjusting the sound.

Time
Appears when pressing the enter button.

DESCRIPTION OF CONTROLS

Front Panel Controls



1 POWER

2 MENU

3 ENTER (Same as ENTER button on your remote control)

4 VOLUME UP / DOWN

5 CHANNEL UP / DOWN

6 Operation indicator.

7 Lamp indicator.

8 Temperature indicator.

If TV is moved from cold to normal room temperature, condensation may form inside TV, wait 3 hours the TV to adjust to room temperature before turning it on.

ADJUSTMENT INSTRUCTIONS

1. Application Object

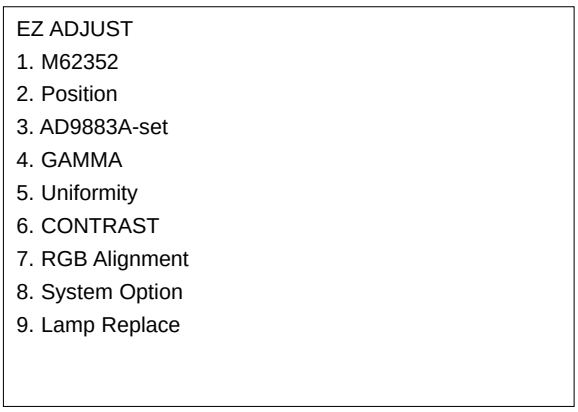
This instruction is for the application to the LCD projection TV(MB-042B Chassis).

2. Notes

(1) Because this is not a hot chassis, it is not necessary to use an isolation transformer. However, the use of isolation transformer will help protect test equipment.
(2) Adjustments must be done in the correct order.
(3) The adjustments should be performed in the circumstance of 25±5°C of temperature and 65±10% of relative humidity if there is no specific designation otherwise.
(4) The input voltage of the receiver must be kept 120V, 60Hz while adjusting.
(5) The receiver must be operated for about 15 minutes prior to adjustments.
The preliminary operation must be performed after receiving 100% white pattern, but reception of the moving picture may also be possible in unavoidable case.

3. Composition of Adjustment Mode

(1) All adjustment modes are entered by pressing the ADJ key on the Service Remote Control, after adjustment press the ADJ key to exit.
(2) Composition of adjustment mode: The first screen composition of pressing ADJ key.



(Fig. 1) The First Screen of Adjustment Mode

(3) Select menu item to adjust(turn to yellow) by using (CH+(▲), CH-(▼)) key and press the enter key to adjust the selected item.
(4) After entering the SUB menu, select the SUB menu item by using (CH+(▲), CH-(▼)) key and adjust the value by using the volume +(◀), volume - (▶) key.
(5) Press the ADJ key to exit after adjustment(s).

4. LCD Adjustment

4-1. NRS Adjustment

※ When the LCD panel load data on regular pixel using high speed charge/discharge with sample & holder, the drain width of TFT gradually decreases and the non-resistance increases, and comes out regular noise on screen(shows vertical line by 12 pixel)

This NRS signal is enforced charge/discharge signal so that the ON/OFF time of TFT mode quickly before starting active video signal, H/L level adjustment is possible to each R, G, B.

(1) Required Test Equipment
1) PC Pattern Generator : 16 Step Gray Pattern
2) Fixation Stand
3) Service Remote Control
4) Circuit thing Jig for Adjustment(Except Driver Board Assy)

(2) Equipment Composition : Follow Fig. 2

(3) Preparation for Adjustment
1) Connect PC Pattern Generator with Adjustment Jig like Fig. 2. (Except Drive part of a circuit block)
2) Select a PC Pattern Generator, 16 Gray.

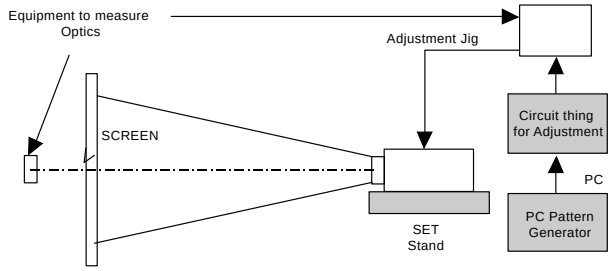
(4) Adjustment Sequence
1) Turn on Adjustment Jig.
2) Select a RGB_PC by pressing Input Select button on Remote Control.
3) Enter to adjustment mode by pressing ADJ button on Remote Control.
4) Select 1. M62352, to adjust RRefV1, GRevV1 and BRefV1.
5) Decrease vertical line Noise by using Volume buttons. (Input a R, G, B input signal, then adjust it individually)
6) When finished, exit adjustment mode by pressing the ADJ button.

4-2. VCOM Adjustment

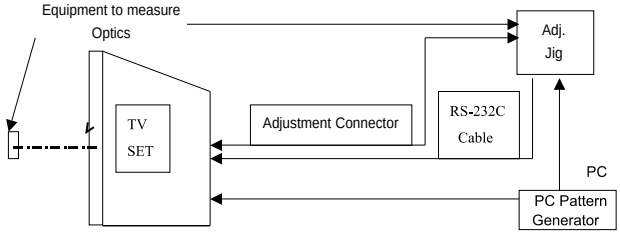
(1) Required Test Equipment
1) PC PATTERN GENERATOR : Pattern Generator which can generate each R,G,B signal and can observe the FLICKER best(ex: me Character Pattern).
2) (Fig. 2) Equipment composition
3) Remote Control
4) Circuit thing Jig for Adjustment(Except Driver Board Assy of adjustment model)

ADJUSTMENT INSTRUCTIONS

(2) Equipment Composition



(Fig. 2-1) Using Adjustment of Circuit thing for Adjustment



(Fig. 2-2) TV Set status Adjustment

(3) Preparation for Adjustment

1) Connect the PC Pattern Generator with circuit thing for adjustment(circuit block except driver part) and Adjustment Jig. shown Fig. 2-1.
2) Set the PC Pattern generator with displayable format(DTV720p, SVGA 60Hz, XGA 60Hz) and turn on it.

(4) Adjustment Sequence

1) Turn on the Adjustment Jig.
2) Select RGB_PC by pressing Input Select Key on Remote Control.
3) Enter Adjustment Mode by pressing ADJ button on Remote Control.
4) Select 1. M62352, to adjust RVCOM, GVCOM and BVCOM.
5) Decrease flicker by using Volume buttons.
(Input a R, G, B input signal, then adjust it individually)
6) When finished, exit adjustment mode by pressing ADJ button on Remote Control.

5. Screen Position Adjustment

(Horizontal/Vertical Position Adjustment)

5-1. Required Test Equipment

Service Remote Control

5-2. Preparation for Adjustment

(1) Connect a power source to TV Set and turn TV Set on.
(2) Heat run for at least 15 min before adjustment.
(3) Receive the main/sub signal of company through 13CH by split screen.
(4) Adjust screen ratio to 16:9 by pressing ARC Key.

5-3. Horizontal Position Adjustment

(1) Press ADJ key on the Remote Control to enter the adjustment mode.
(2) Select 2. Position.
(3) Select H_Position with channel key in adjust mode.
(4) Adjust data with using the Volume key on the Remote Control in order to get left/right screen symmetry.
(Refer to Fig. 3)

5-4. Vertical Position Adjustment

(1) Select V_Position with channel key in adjust mode.
(2) Change the data to symmetrized top and bottom of screen(refer to Fig. 3) by pressing the Volume key on Remote Control.

(Fig. 3) Adjustment for Horizontal/Vertical Position on Screen

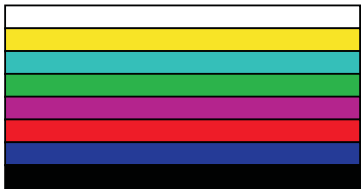
6. Component 2 Offset Adjustment

6-1. Required Test Equipment

Service Remote Control, 802F

6-2. Preparation for Adjustment

(1) Connect a power source to TV Set and turn TV Set on.
(2) Heat run for at least 15 min before adjustment.
(3) Receive the signal on Component2.
(4) Receive the 720P and HozTVBar Pattern of 802F.



HozTVBar Pattern

6-3. Offset Adjustment

(1) Press ADJ key on the Remote Control to enter the adjustment mode after more than 10 seconds of receiving the signals.
(2) Press the Enter key in 3. AD9883-set of adjustment item to adjust automatically.
(3) When the adjustment is completed, enter the adjustment mode by pressing Enter key after appearing " Adjustment Completion(Press the Enter)" OSD.

ADJUSTMENT INSTRUCTIONS

7. Adjustment of White Balance and Gamma

7-1. Required Test Equipment

(1) Illuminometer (name of model : CA-100) 1EA —> Measure color of projecting screen center

※ CA-110(name of model) is possible to measure White Balance and Gamma —- leave it 20Cm from screen center Follow a measurement machine manual to set CA-100 and CA-110 measurement machine.

(2) Pattern Generator 1EA —> 16 step Gray Pattern, 64 step Gray Pattern
(3) Set Fixation Stand 1EA
(4) Remote Control 1EA
(5) Circuit thing Jig for adjustment(Except Drive Board Assy of adjustment model)
--- Programmed Digital Board so that the VDP Test Pattern can output white signal by 1 level form 0 to 255 level.

7-2. Equipment Composition

Adjust to the same condition of equipment composition diagram.

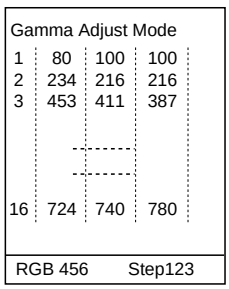
7-3. Preparation for Adjustments

Compose the equipment follow Fig. 2 and place the set on the fixation stand.

(1) Select the VDP Test Pattern signal to R1, G1, B1.
(2) Press the Instart key to select 1. LCD --> 2. 62352 and then select 5. RVREF, 8. GVREF, 12. BVREF in adjust mode.
(3) Adjust the luminance of CA100 below 0.75Cd. (The adjustment range is 196~202)
(4) Exit adjustment mode by pressing ENTER button on Remote Control.
(5) Select 3. 7050 RGB Set in adjustment mode.
(6) Check the data 1. RContrast, 8. GContrast, 15. BContrast is 515. Otherwise set the data 515 by using volume button.

7-4. Adjustment Sequence

(1) Output the 255,255,255 signal of VDP Test Pattern, then display the maximum white pattern on screen.
(2) Gamma Adjust Mode is displayed as below when select 4. Gamma adjust by selecting ADJ key on R/C.



* 1st Column : 16 Step Level
* 2nd Column : R Adjustment Data
* 3rd Column : G Adjustment Data
* 4th Column : B Adjustment Data

(3) Change the 16 Step RGB Data to select white balance x=283, y=297(D9300K).
(4) Measure the luminance with changed data.
(5) Set the every Gamma data of 16 step to 2.2 on the basis of measured luminance data in 3).
(Max luminance *(n1/16)**2.2) — Max luminance : measured luminance data n1 = every step unit when separating signal level to 16 step)
(6) Output the 240, 240, 240(15th data in max white output signal level) in the VDP Test Pattern, change the 15th RGB Data value to come out white balance x=283, y=297(D9300K) and measured step luminance in 5).
(7) Output the 224, 224, 224(14th data in max white output signal level) in the VDP Test Pattern, change the 14th RGB Data value to come out white balance x=283, y=297(D9300K) and measured step luminance in 5).
(8) As shown above, output the VDP Test Pattern signal(208/192/176/160/144/128/112/96/80/64/48/32/16) and change the RGB Data value of each step to come out white balance x=283, y=297(D9300K) and measured luminance in 3).

7-5. Gamma adjustment manually

This is adjustment(after finish the 3-4) to check whether Gamma/White Balance adjustment are well adjusted and make correction manually.

(1) Prepare the PC Pattern Generator which is possible to output R/G/B of 16 step and 64 step Gray Pattern.
(2) Equipment composition : Follow Fig. 2.
(3) Turn on the Jig for adjustment.
(4) Select the RGB_PC by pressing the input select button on Remote Control.
(5) Output the 16 Gray Pattern in PC Pattern Generator.
Check it with the naked eye whether Screen Gamma and W/B is right about each Gray.
If it's not, press the ADJ button on Remote Control and then adjust the level data of each step manually in sub menu of 4. Gamma Manual adjust.
(6) Output the 64 Gray Pattern in PC Pattern Generator.
Check it with the naked eye whether Screen Gamma and W/B is right about each Gray or whether there is Gamma noise.
If there's any problem, adjust in 5).
(7) After finishing adjustment, exit adjustment mode by using ADJ button on Remote Control.

8. White Uniformity Adjustment

8-1. Required Test Equipment

(1) Uniformity measurement equipment : Equipment which can measure chromaticity in the whole screen
(2) Set Stand 1EA
(3) Service Remote Control
(4) Circuit thing Jig for Adjustment(Except Driver Board Assy of adjustment model)
--- Programmed Digital Board so that the VDP Test Pattern can output white signal by 1 level form 0 to 255 level.

8-2. Equipment Composition

Compose the equipment follow Fig. 2 and place the set on the fixation stand.

8-3. Preparation for Adjustment

(1) Composite the equipment as shown Fig 2, and place the set on fixation stand.
(2) After inputting company channel 13, adjust color uniformity like Horizontal/Vertical position adjustment of input signal part adjustment by using Service Remote Control.

(3) After pressing ADJ key on Service Remote Control, select the adjustment mode 5. Uniformity adj.
Refer to register value and correct register value if need.

<Resister Explanation about uniformity adjustment>

1. RamCtrl : s/w saving uniformity write order(Do not adjust)
2. CSHP : Horizontal start point designation ---adjustable
3. CSVP : Vertical start point designation ---adjustable
4. CEHP : Horizontal END point designation ---adjustable
5. CEVP : Vertical END point designation ---adjustable
6. Mode : uniformity mode select --- adjustable if need
   *** 0 : 221point & 3level ---- default value
   *** 1 : 221point & 4level
   *** 2 : 825point & 3level
   *** 3 : 825point & 4level

7. KHH : Upper 2byte of horizontal line correction coefficient -- Change according to CSHP, CEHP value.
8. KHL : Upper 2byte of vertical line correction coefficient -- Change according to CSHP, CEHP value.

** How to calculate KHH, KHL value
LCD panel size = 1280 x 720
Correction Point = 221 point
--> 17 horizontal points x 13 vertical points
(16 horizontal segments x 12 vertical points)

● H Coefficient(KHH, KHL)
--> Calculation method (CEHP-CSHP=1280, Horizontal segment value =16)

H coefficient = 1/(number of pixel intervals between setting in the horizontal direction)

Hcoeff = 1/((1280/16)-1) = 0.012658227

hex(0.012658227 x 2^{16}) = 0 x 033D, Hcoeff(hex) = 0 x 033D + 1 = 0 X 33E

9. KVH : Upper 2byte of vertical line correction coefficient -- Change according to CSVP, CEVP value.
10. KVL : Upper 2byte of vertical line correction coefficient -- Change according to CSVP, CEVP value.

● V Coefficient(KVH, KVL)
--> Calculation method (CEVP-CSVP=720, Vertical segment value =12)

V coefficient = 1/(number of pixel intervals between setting in the horizontal direction)

Vcoeff = 1/((720/12)-1) = 0.016949152

hex(0.016949152 x 2^{16}) = 0 x 0456, Vcoeff(hex) = 0 x 0456 + 1 = 0 X 0457

11. RL1H : Upper 9bit of MID2 brightness correction coefficient in R MIN.
    --- Change according to RMIN and RMID2 value.
12. RL1L : Lower 9bit of MID2 brightness correction coefficient in R MIN.
    --- Change according to RMIN and RMID2 value.
13. RL2H : Upper 9bit of MID1 brightness correction coefficient in R MID2.
    --- Change according to RMID2 and RMID1 value.
14. RL2L : Lower 9bit of MID1 brightness correction coefficient in R MID2.
    --- Change according to RMID2 and RMID1 value.
15. RL3H : Upper 9bit of MAX brightness correction coefficient in R MID1.
    --- Change according to RMID1 and RMAX value.
    (use it while adjusting 4 coefficient)
16. RL3L : Lower 9bit of MAX brightness correction coefficient in R MID1.
    --- Change according to RMID1 and RMAX value.
    (use it while adjusting 4 coefficient)

<L Coefficient Calculation Method>

Using 3coefficient Level
Assume that the value of R/G/B MIN, MID2,MID1 is 192, 448, 704.
R/G/B MIN = 192
R/G/B MID2 = 448
R/G/B MID1 = 704

● L Coefficient(RL1H~BL3L)
--> Calculation method (L1)

L1 coefficient = 1 / (brightness level(MID2) - brightness level(MIN)

L1coeff = 1 / (448-192) = 1 / 256 = 0.00390625

L1coeff(hex) = hex(0.00390625 x 2^{18}) = 0 x 0400

--> L1H(high 9bit) = b'000000010 L1L(low 9bit) = b'000000000

- calculate L2, L3 same with L1

L2 coefficient = 1 / (brightness level(MID1) - brightness level(MID2)

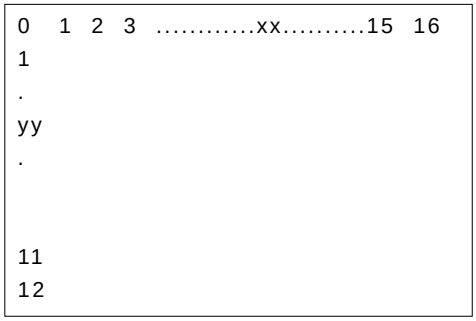
L3 coefficient = 1 / (brightness level(MAX) - brightness level(MID1)
: case of 4 Brightness Level

17. GL1H : Upper 9bit of MID2 brightness correction coefficient in G MIN.
    --- Change according to GMIN and GMID2 value.
18. GL1L : Lower 9bit of MID2 brightness correction coefficient in G MIN.
    --- Change according to GMIN and GMID2 value.
19. GL2H : Upper 9bit of MID1 brightness correction coefficient in G MID2.
    --- Change according to GMID2 and GMID1 value.
20. GL2L : Lower 9bit of MID1 brightness correction coefficient in G MID2.
    --- Change according to GMID2 and GMID1 value.
21. GL3H : Upper 9bit of MAX brightness correction coefficient in G MID1.
    --- Change according to GMID1 and GMAX value.
    (use it while adjusting 4 coefficient)
22. GL3L : Lower 9bit of MAX brightness correction coefficient in G MID1.
    --- Change according to GMID1 and GMAX value.
    (use it while adjusting 4 coefficient)
23. BL1H : Upper 9bit of MID2 brightness correction coefficient in B MIN.
    --- Change according to BMIN and BMID2 value.
24. BL1L : Lower 9bit of MID2 brightness correction coefficient in B MIN.

--- Change according to BMIN and BMID2 value.
25. BL2H : Upper 9bit of MID1 brightness correction coefficient in B MID2.
--- Change according to BMID2 and BMID1 value.
26. BL2L : Lower 9bit of MID1 brightness correction coefficient in B MID2.
--- Change according to BMID2 and BMID1 value.
27. BL3H : Upper 9bit of MAX brightness correction coefficient in B MID1.
--- Change according to BMID1 and BMAX value.
(use it while adjusting 4 coefficient)
28. BL3L : Lower 9bit of MAX brightness correction coefficient in B MID1.
--- Change according to BMID1 and BMAX value.
(use it while adjusting 4 coefficient)
29. RLMIN : Setting up the MINIUM Level of R --- Set under 200
30. RLMID2 : Setting up the MIDDLE 2nd Level of R ---Middle level when 3coefficient
31. RLMID1 : Setting up the MIDDLE 1st Level of R --- Max level when 3coefficient
32. RLMAX : Setting up the MAX Level of R
33. GLMIN : Setting up the MINIUM Level of G --- Set under 200
34. GLMID2 : Setting up the MIDDLE 2nd Level of G ---Middle level when 3coefficient
35. GLMID1 : Setting up the MIDDLE 1st Level of G --- Max level when 3coefficient
36. GLMAX : Setting up the MAX Level of G
37. BLMIN : Setting up the MINIUM Level of B --- Set under 200
38. BLMID2 : Setting up the MIDDLE 2nd Level of B --- Middle level when 3coefficient
39. BLMID1 : Setting up the MIDDLE 1st Level of B --- Max level when 3coefficient
40. BLMAX : Setting up the MAX Level of B
41. HVSCAN : Setting up the scan direction while adjusting uniformity - Do not adjust
42. TestMode : uniformity adjustment test - Do not adjust

8-4. Adjustment Sequence

(1) Adjust the screen coordinates as shown below.



(Fig. 4) Screen division diagram for uniformity adjustment

(2) Output the VDP TEST PATTERN signal correspond to the Max value.
Read the white coordinates and communicate 3 line with ET7050 IC through measurement equipment of optics.
Adjust screen coordinates data to adjust the color uniformity of max point.
At this time, make sure that deviation is +5~-5% and standard is color coordinate of center.
(3) Output the VDP TEST PATTERN signal correspond to the MID value.
Read the white coordinates and communicate 3 line with ET7050 IC through measurement equipment of optics.
Adjust screen coordinates data to adjust the color uniformity of mid point.
At this time, make sure that deviation is +5~-5% and standard is color coordinate of center.
(4) Output the VDP TEST PATTERN signal correspond to the MIN value.
Read the white coordinate and communicate with ET7050 IC through measurement equipment of optics.
Adjust screen coordinates data to adjust the color uniformity of miner point.
At this time, make sure that deviation is +5~-5% and standard is color coordinate of center.
(5) White the miner, middle, maximum data for each point to confront to each MICOM address.

9. Brightness Adjustment of Main/Sub Screen

Operate this adjustment when the brightness of Main/Sub screen is different.

(1) Receive signal(RF 06Ch.) on the Main/Sub screen in the twin picture.
(2) Confirms picture probably is the normal.
(3) Check the “US06CH” with naked eyes in 06Ch. pattern and if there is difference, adjust like this.
- The field and the letters are distinguished.

(4) Adjusting Main screen
1) Select the 6. CONTRAST by pressing “ADJ” key on the remote control for adjustment.
2) Select the Contrast(m) of adjustment item using CH +/- key and revises using VOL +/- key.

(5) Adjusting Sub screen
1) Select the 6. CONTRAST by pressing “ADJ” key on the remote control for adjustment.
2) Select the Contrast(s) of adjustment item using CH +/- key and revises using VOL +/- key.

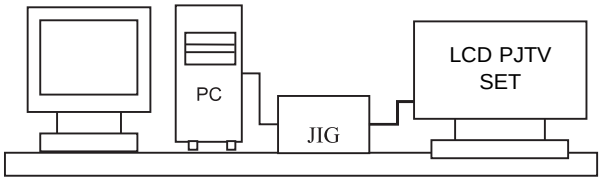
* Ask for repairs when the data value is changed over ±2.
(Initial Value: 32)

10. EDID Data Input

10-1. Required Test Equipment

(1) Jig for adjusting PC, DDC.
(PC serial to D-sub. Connection equipment)
(2) S/W for writing DDC (EDID data write & read)
(3) D-sub terminal

10-2. Setting of Devices



10-3. Preparation for Adjustment

(1) Set devices as above and turn the PC, jig on.
(2) Put the S/W for writing DDC (EDID data write & read) into operation. (Operated in DOS mode.)

10-4. Sequence of Adjustment

(1) Put the SET on the table and turn the power on.
(2) Input the product code, production week/year, serial number (if it is not input, write “01”) to the S/W for writing DDC.
(3) Put the EDID write instruction into operation.

11. Check and adjustment RGB Alignment

11-1. Required Test Equipment

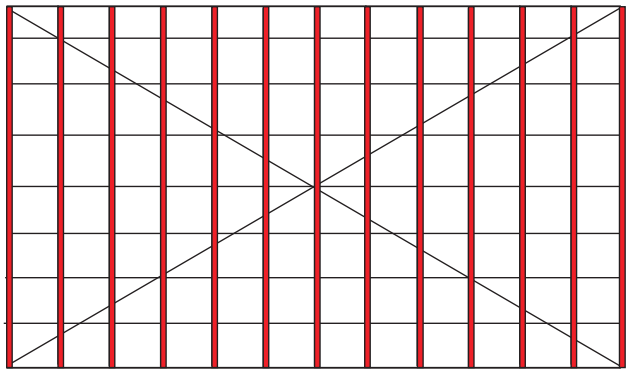
Service Remote Control

11-2. Preparation for Adjustment

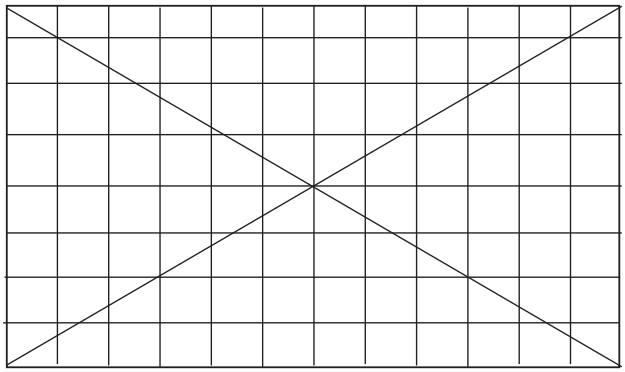
(1) Connect power source to TV Set and turn TV Set on.
(2) Before adjusting, Heat Run more than 15 minutes.

11-3. Check and adjustment RGB Alignment

(1) After pressing EYE key, enter the (Fig. 5) pattern.
(2) Check the RGB Align
(3) When fitting RGB Align, adjustment is completed.
(4) When deviating RGB Align, select the 7. H-Position by pressing “ADJ” key on the Service Remote Control.
Change the Channel key to select H POS R, H POS G, H POS B and fit color.

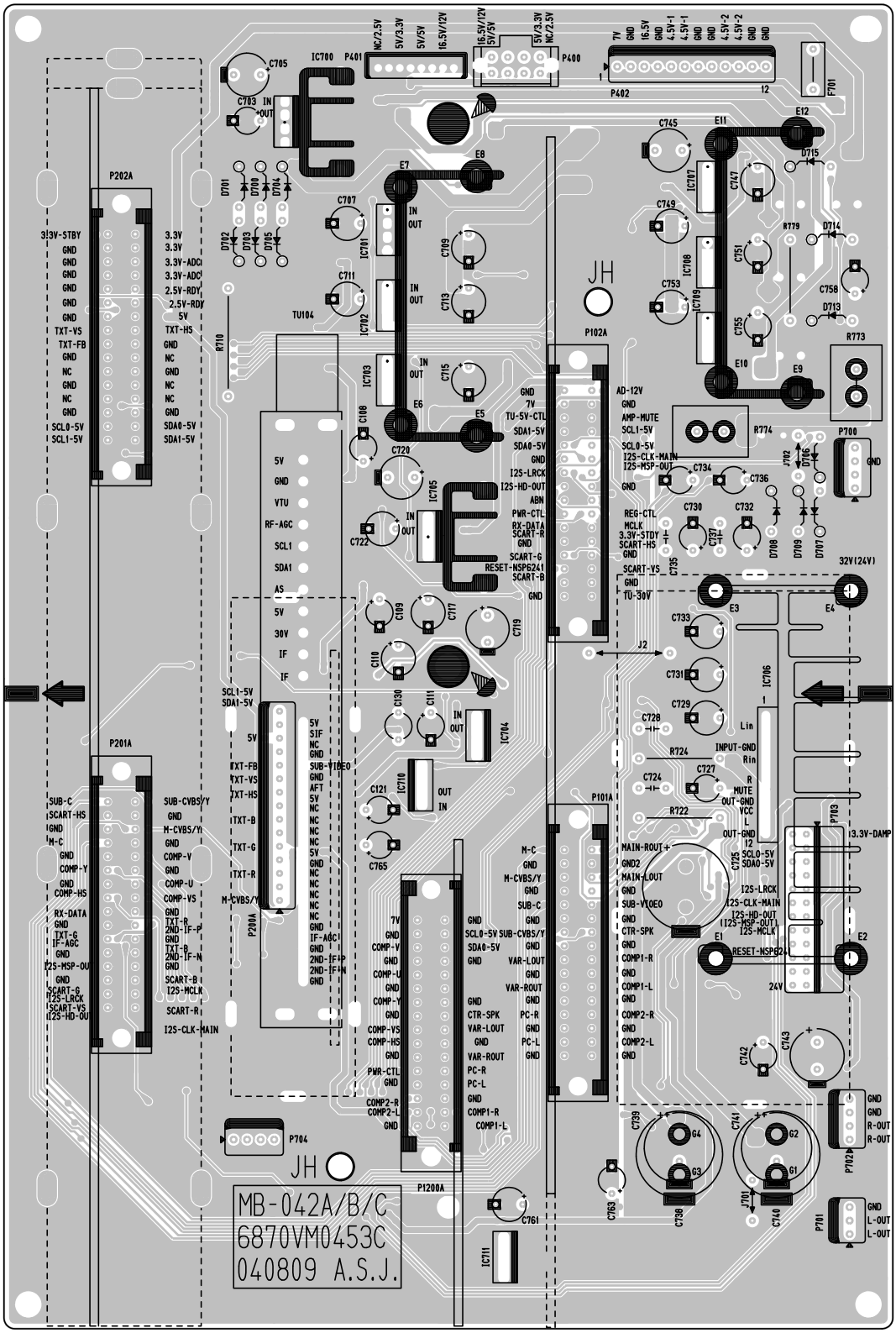


(Fig. 5) Deviating Red Pixel, collectively(before adjusting)

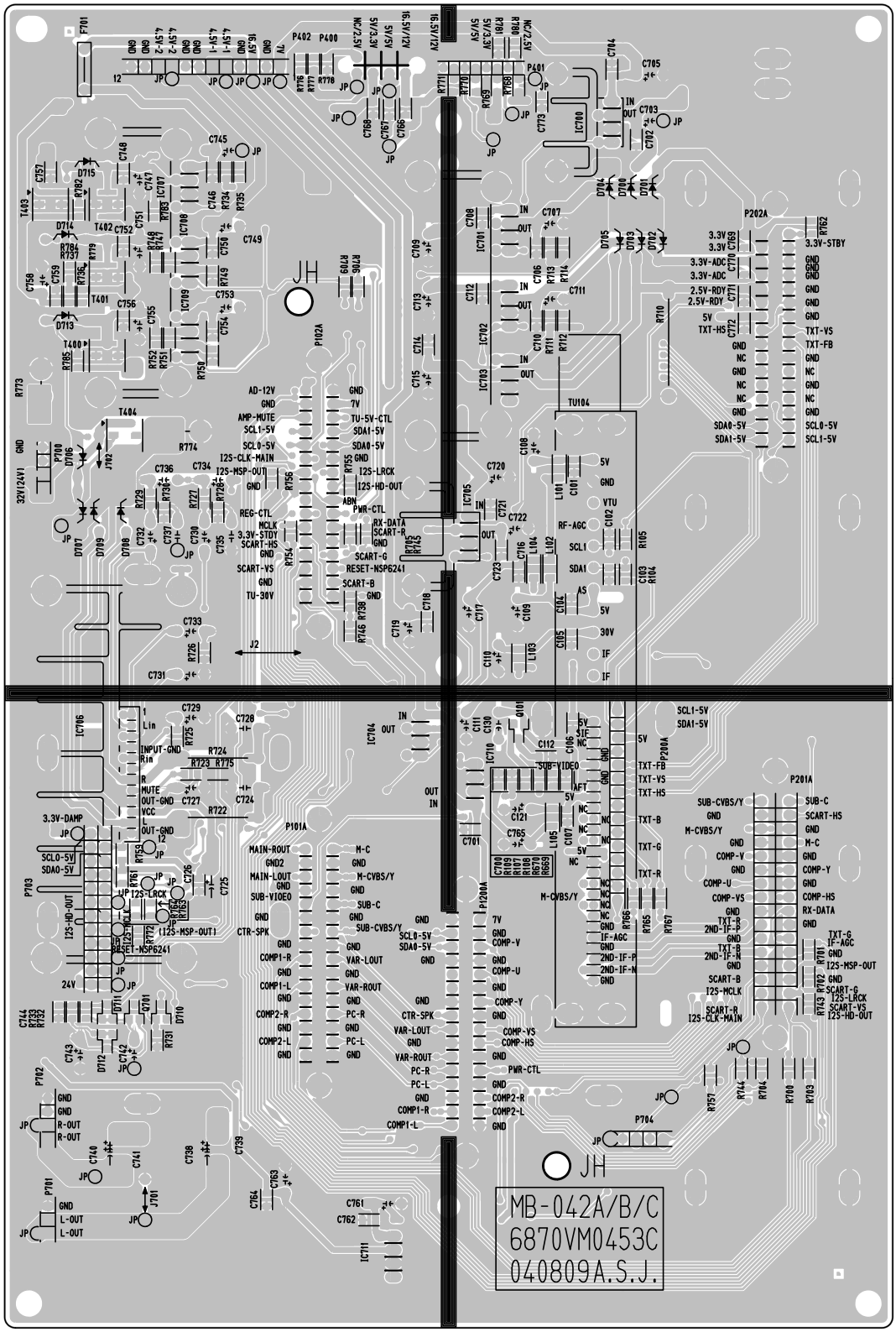


(Fig. 6) After adjusting RGB Align(normal screen)

MAIN(TOP)

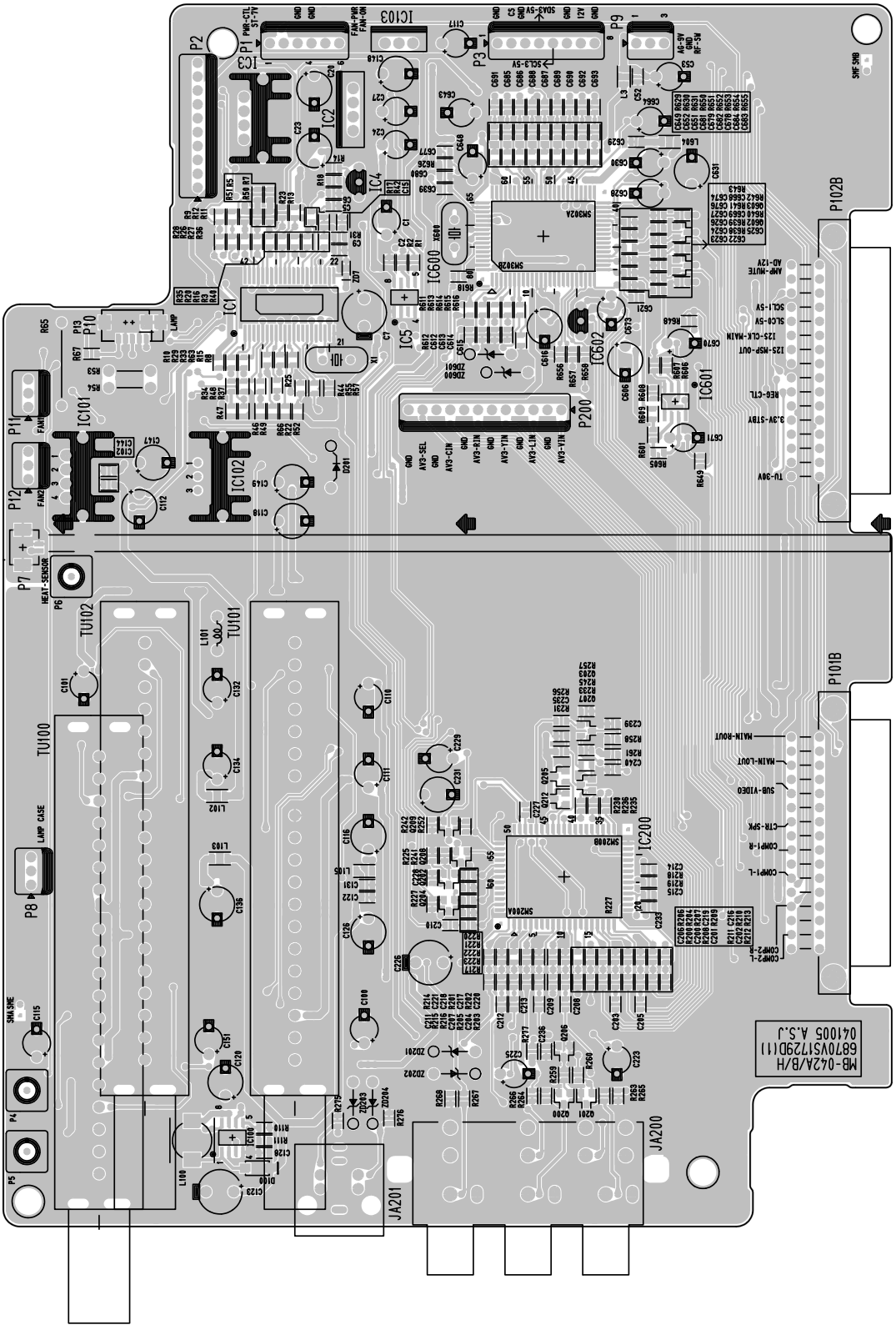


MAIN(BOTTOM)



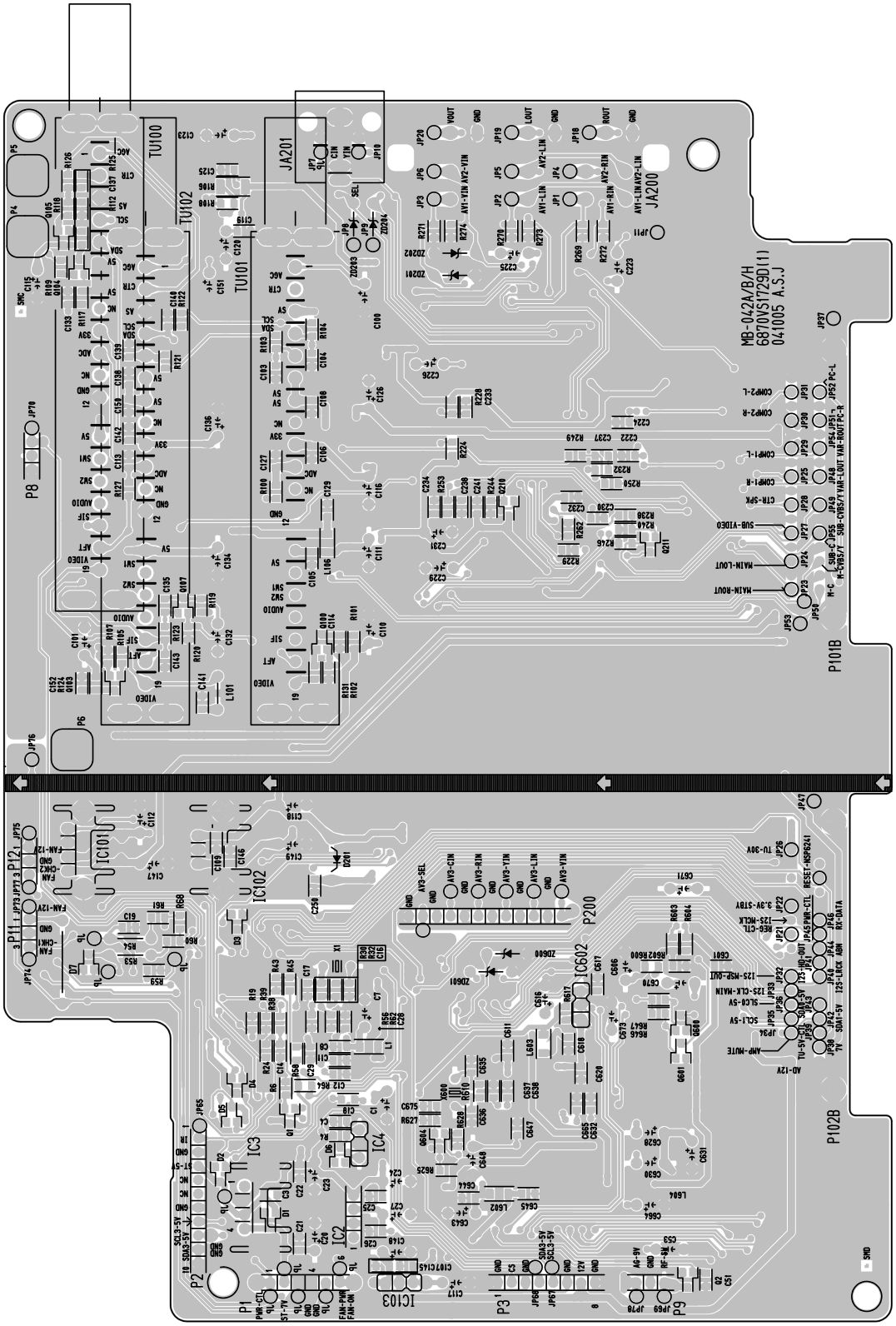
PRINTED CIRCUIT BOARD

TUNER(TOP)



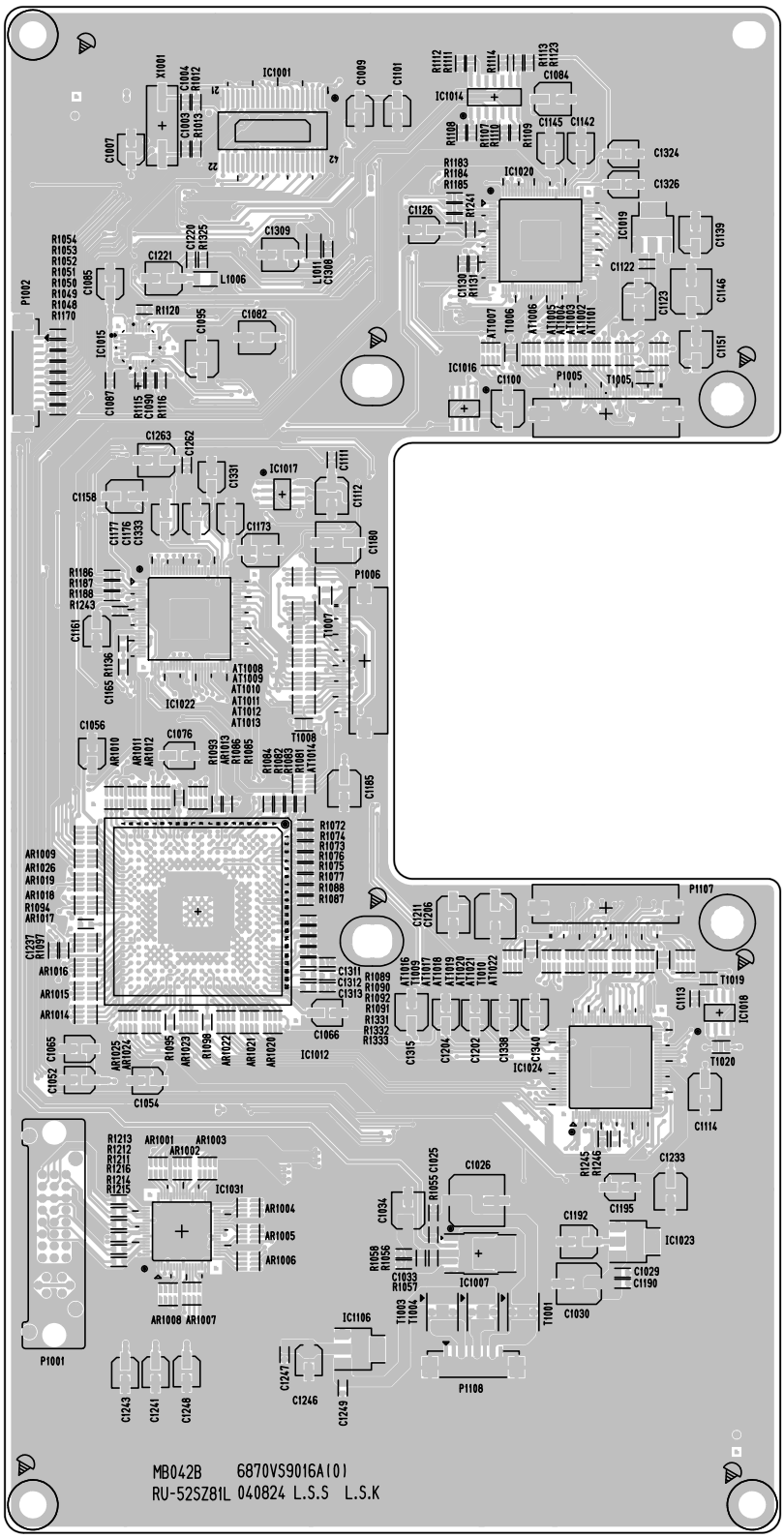
PRINTED CIRCUIT BOARD

TUNER(BOTTOM)



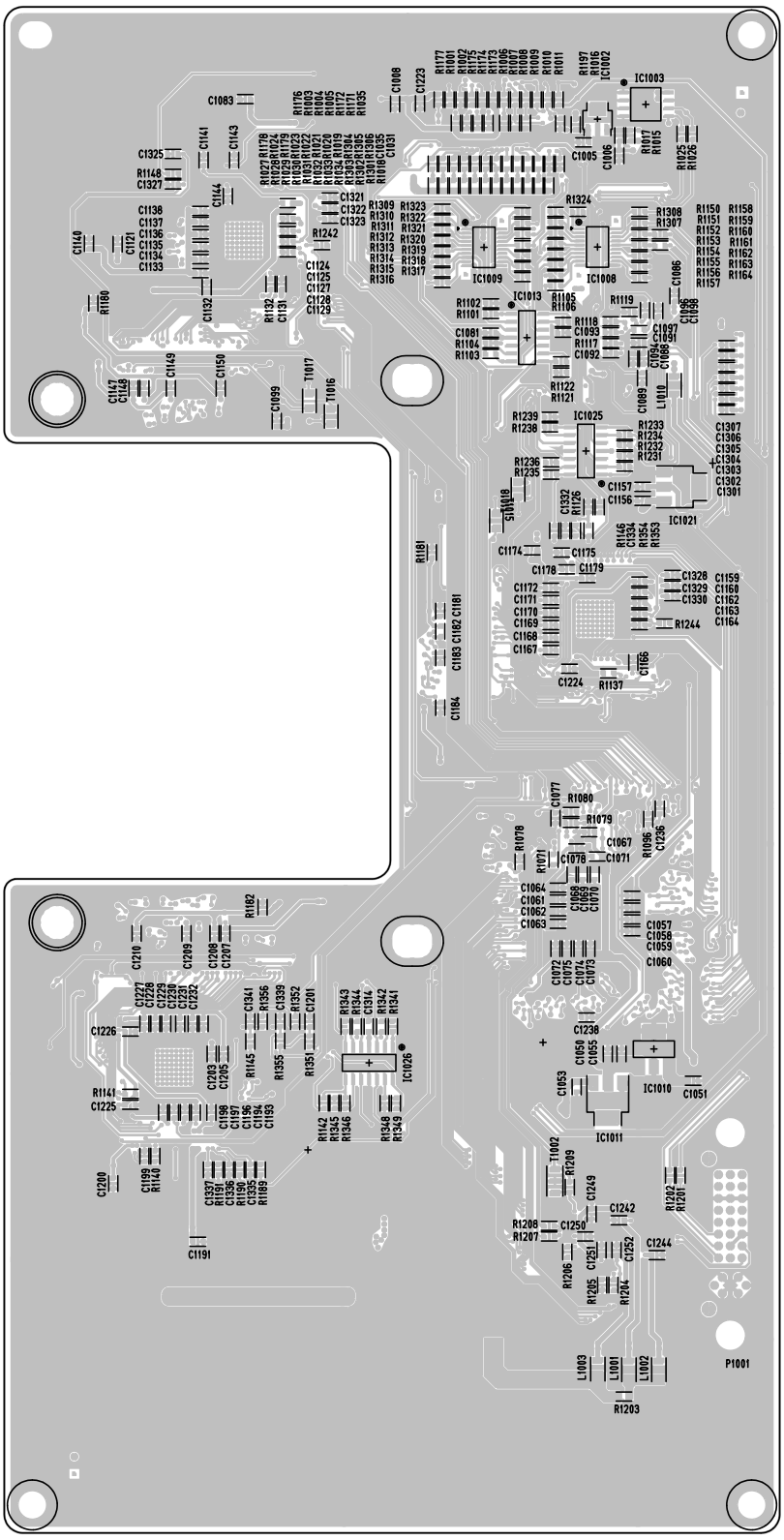
PRINTED CIRCUIT BOARD

DRIVER(TOP)



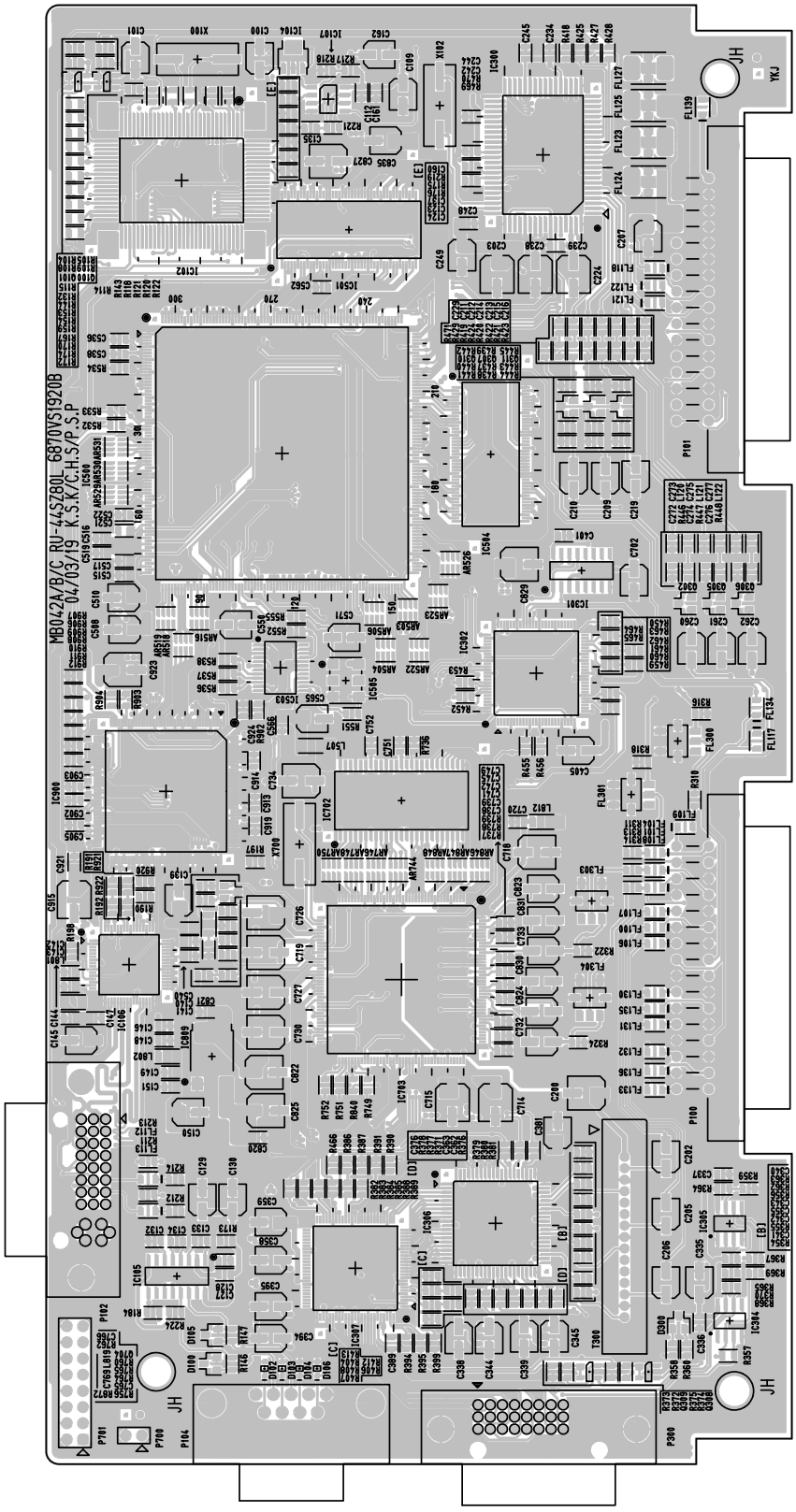
PRINTED CIRCUIT BOARD

DRIVER(BOTTOM)



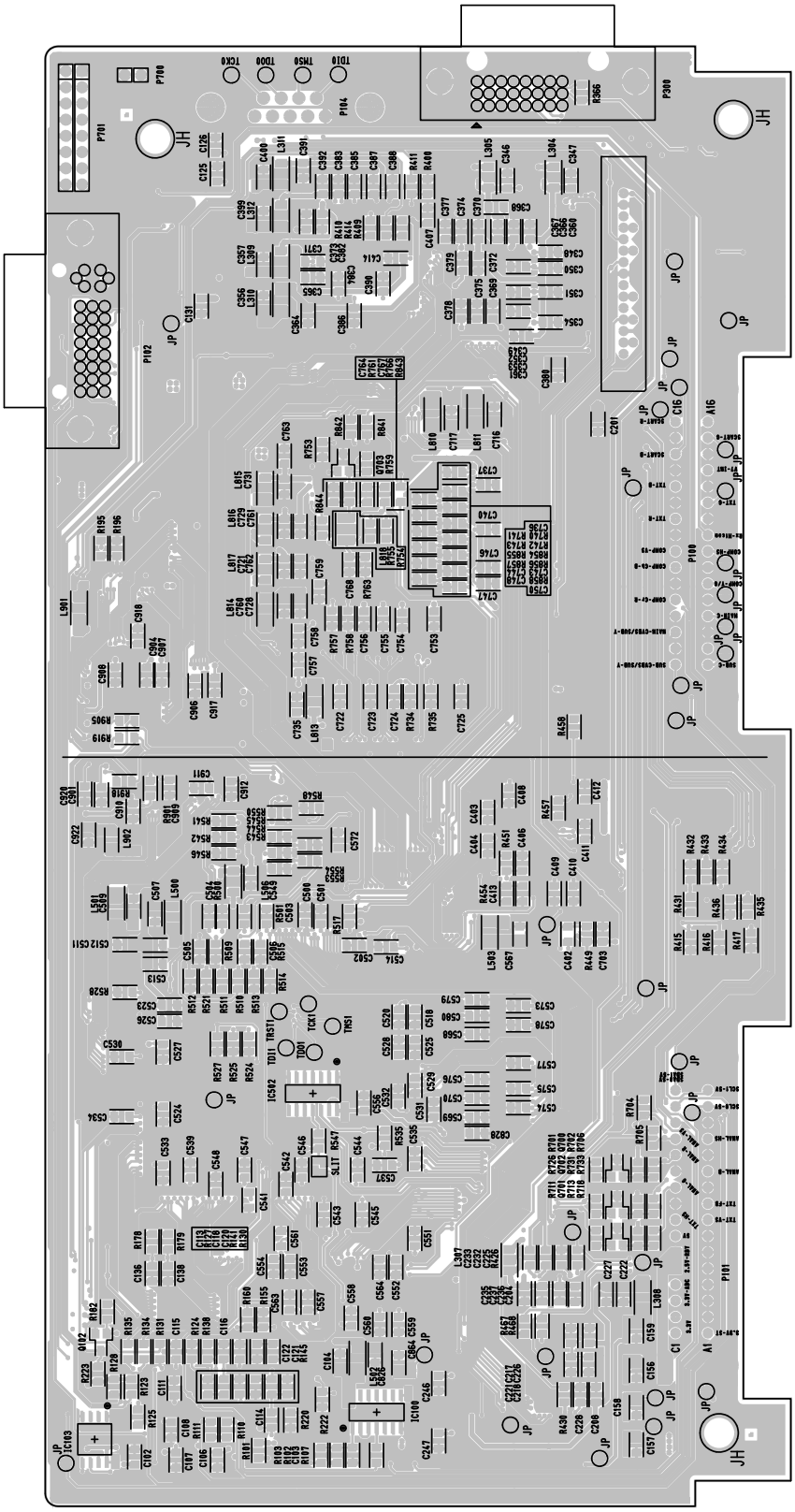
PRINTED CIRCUIT BOARD

DIGITAL(TOP)



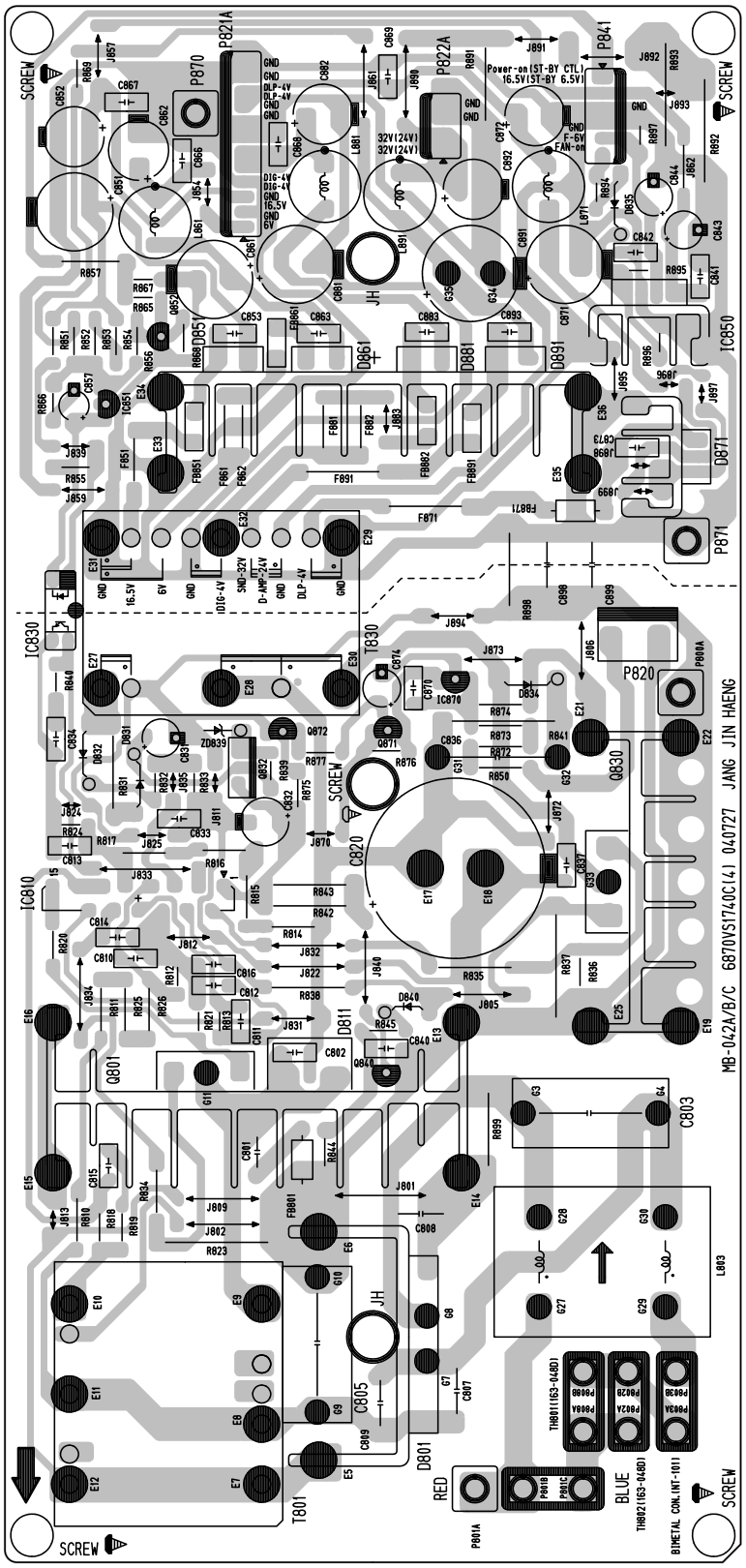
PRINTED CIRCUIT BOARD

DIGITAL(BOTTOM)

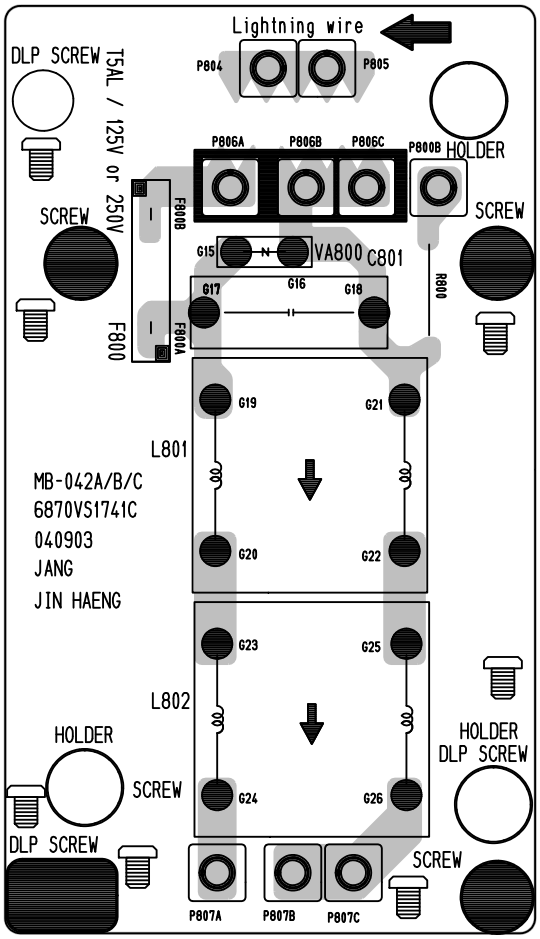


PRINTED CIRCUIT BOARD

SMPS

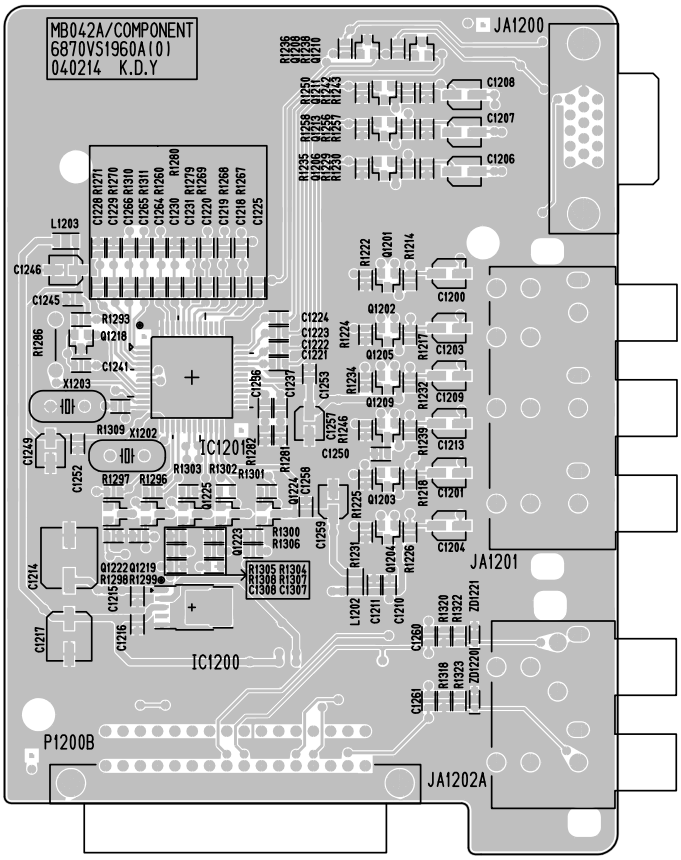


AC INPUT

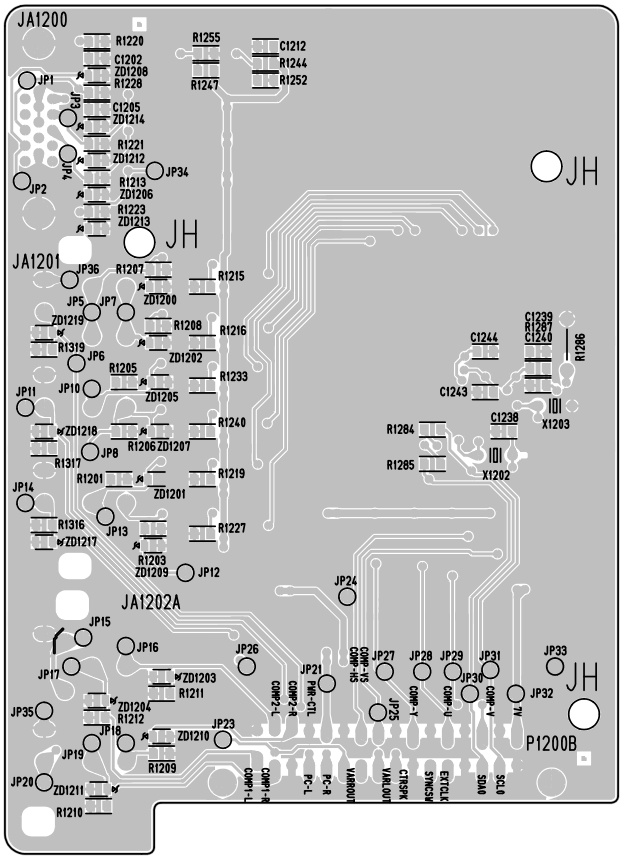


PRINTED CIRCUIT BOARD

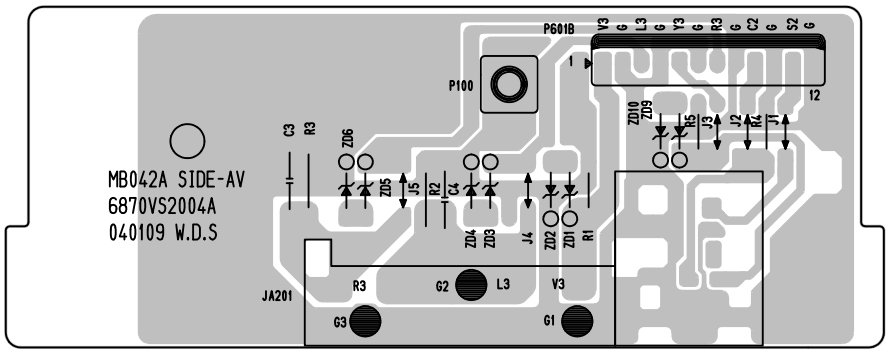
CRM(TOP)



CRM(BOTTOM)

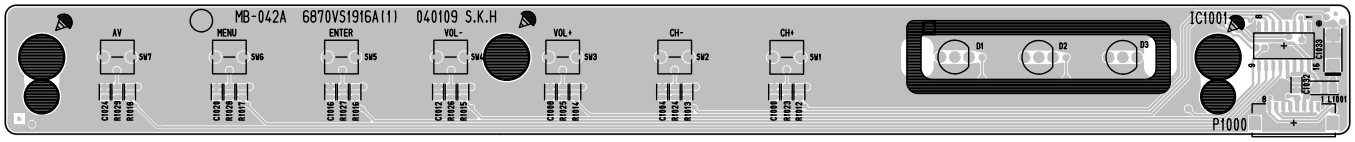


SIDE A/V

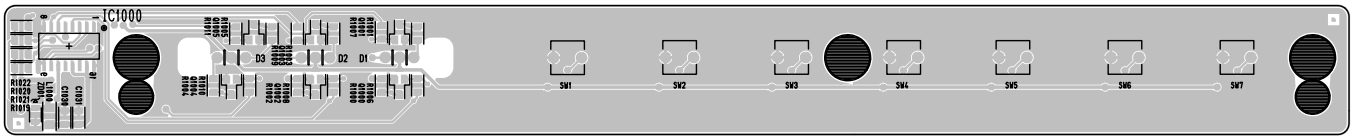


PRINTED CIRCUIT BOARD

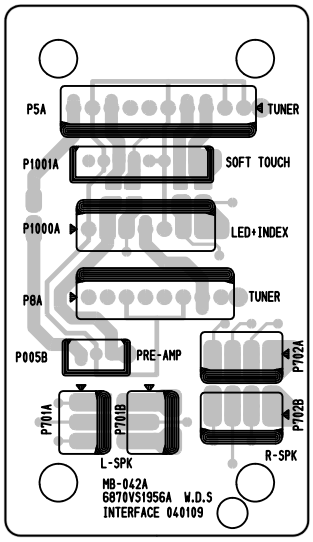
CONTROL(TOP)



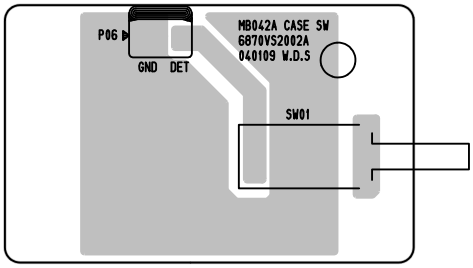
CONTROL(BOTTOM)



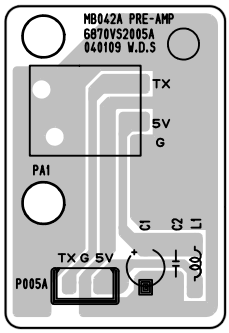
INTERFACE



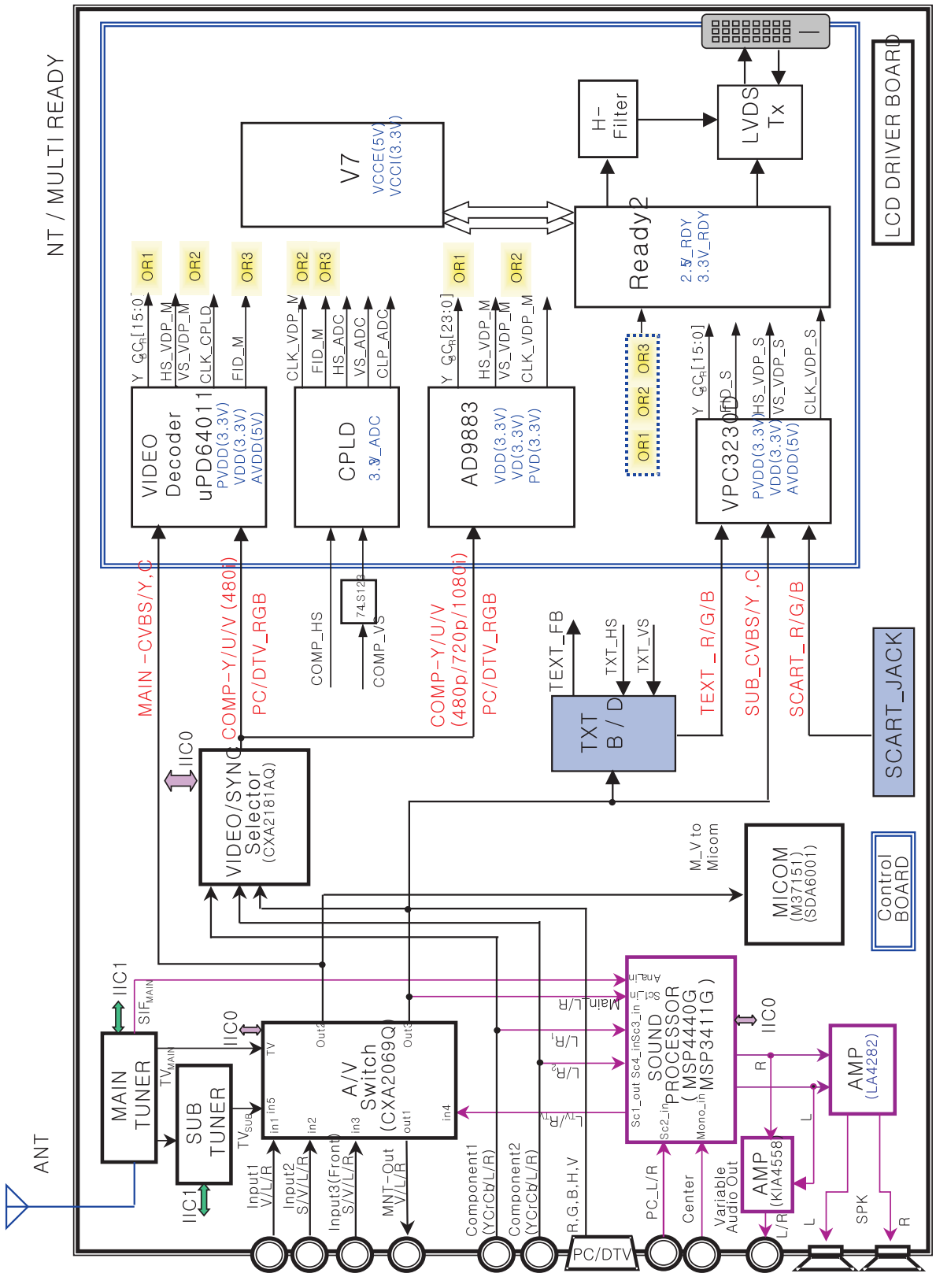
CASE DET



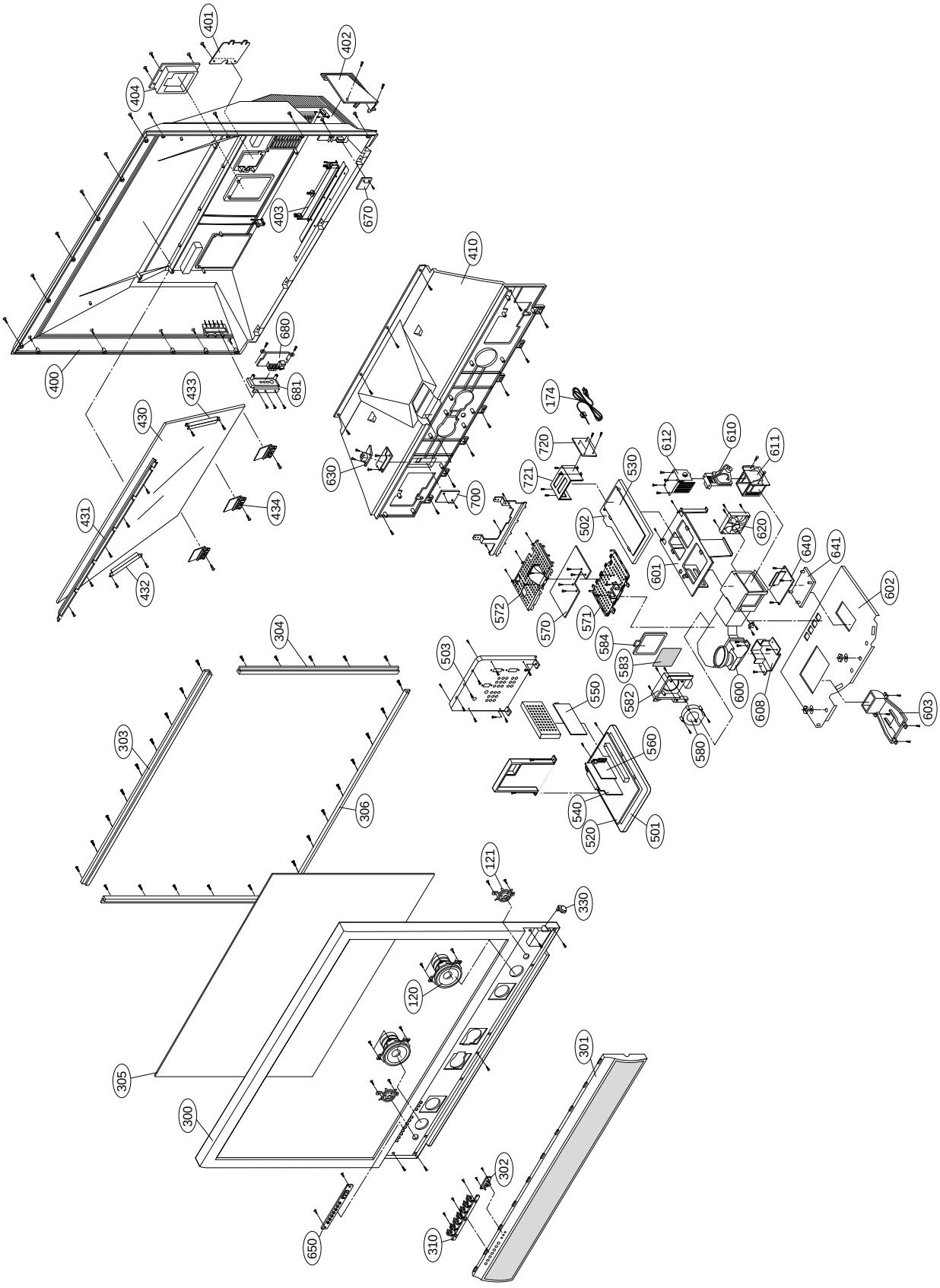
PRE-AMP



BLOCK DIAGRAM



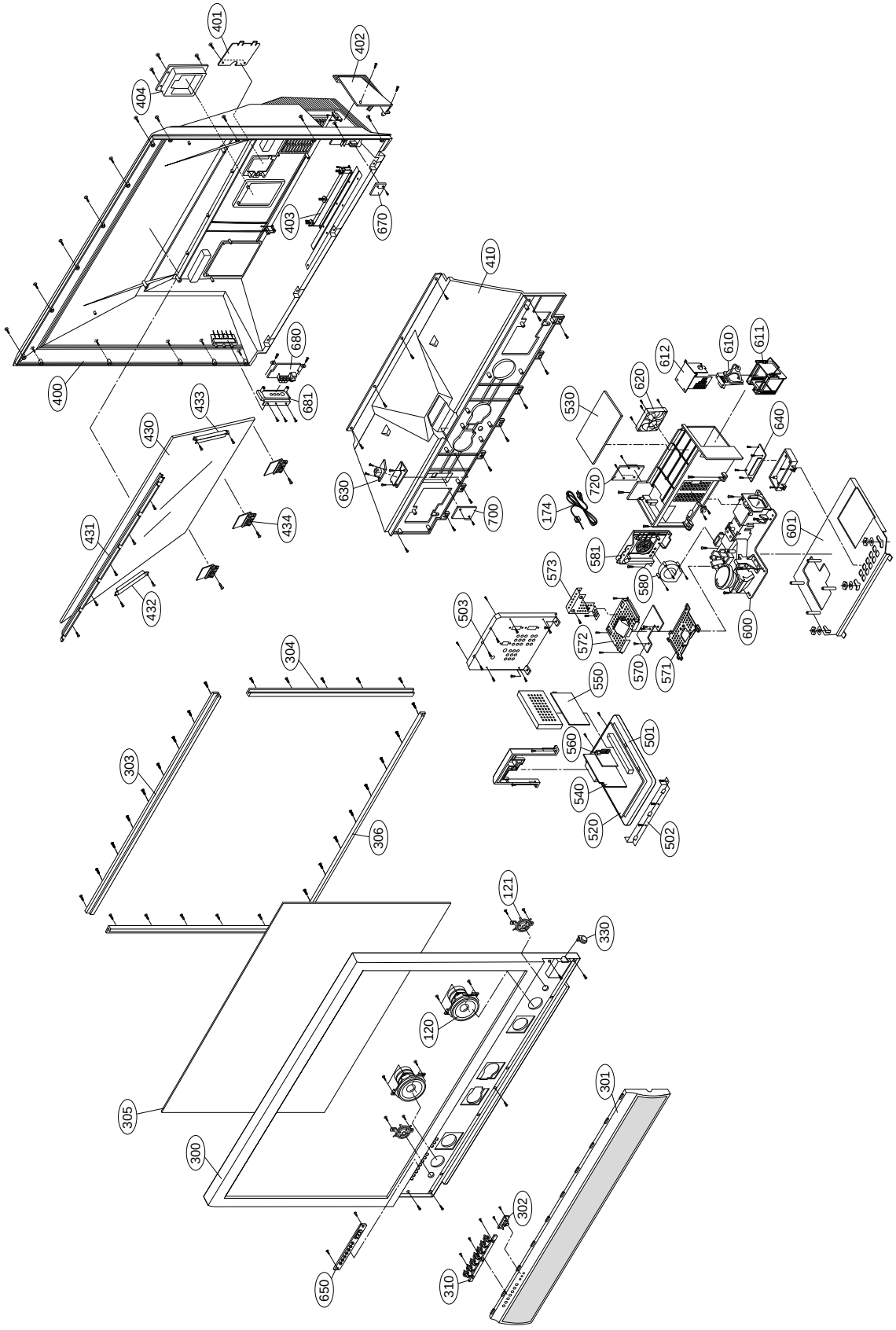
EXPLODED VIEW



EXPLODED VIEW PARTS LIST

No.	Part No.	Description
120	6400WESC01A	SPEAKER,WOOFER C080P23K1450 ESTEC WOOFER 8OHM 15/25W 84DB 80 NON
121	6400DESA01A	SPEAKER,TWEETER D016D01K1450 ESTEC 8HMOHM 15/25W 85DB 50 NON
174	6410VUH004A	POWER CORD,UL/CSA3000MM 3P HUG BLACK VOLEX CSA 3000MM 500MH 7A
300	3090V00575A	CABINET,RN-52SZ80L LCD PJT FRONT
301	4811V00123C	BRACKET ASSEMBLY,GRILLE RU-52SZ81L NON ZENITH BEST BUY
302	3520V00436A	INDICATOR,LED RU-44SZ80L PMMA 3 PHY NON
303	4980V00C04E	SUPPORTER,SCREEN AL RN-52SZ80
304	4980V00C04F	SUPPORTER,SCREEN AL RN-52SZ80
305	3351V00022A	SCREEN ASSEMBLY,1178*670*3.9 NEW STRUCTURE
306	4980V00A29C	SUPPORTER,SCREEN AL BAR(U/L)
310	5020V00903A	BUTTON,CONTROL DN-44SZ80L ABS 7KEY XCANVAS
330	5020V00904C	BUTTON,POWER RU-44SZ81L ABS, AF-303S 1KEY ZENITH
400	3809V00462K	BACK COVER ASSEMBLY,RU-52SZ81L NON 2ND LCD
401	4980V00B64B	SUPPORTER,PLATE SECC(EGI) RN-52SZ80L
402	3550V00452E	COVER,LAMP RU-52SZ80L HIPS 40AF SPRAY
403	4980V00C41E	SUPPORTER,ENGINE SECC(EGI) RN-48/52SZ80L HD3
404	3550V00560A	COVER,FAN RU-52SZ81L ABS NON
410	3550V00451B	COVER,DN-52SZ82D HIPS 40AF DUST
430	5018V00087A	MIRROR, 1112(H1)*564(H2)*590(V) 3.0 DN-52SZ80L
431	4980V00B95A	SUPPORTER,MIRROR AL RN-52SZ80L
432	4980V00C07C	SUPPORTER,MIRROR SECC(EGI) LEFT RN-52SZ80L
433	4980V00C06C	SUPPORTER,MIRROR SECC(EGI) RIGHT RN-52SZ80L
434	4930V00380A	HOLDER,MIRROR LOWER PS DN-44SZ80L
501	3210V00165B	FRAME,ABS AF-303S RN-48SZ40H MAIN CHASSIS
502	3210V00166A	FRAME,HIPS 40AF RN-48SZ40 MAIN CHASSIS
503	4811V00125D	BRACKET ASSEMBLY,REAR AV RU-44SZ80L MB042B TERMINAL BOARD
520	6871VMMR46P	PCB ASSEMBLY,MAIN MB042B RU-52SZ81L BOTTOM
530	6871VPMA46K	PCB ASSEMBLY,POWER SMPS MB-042B M/I RU-52SZ81L
540	6871VSME68D	PCB ASSEMBLY,SUB TUNER MB042B RU-52SZ81L
550	6871VSMX04S	PCB ASSEMBLY,SUB DIGITAL MB042B RU-52SZ81L
560	6871VSME84A	PCB ASSEMBLY,SUB CRM MB042A RU-44SZ80L
570	6871VSMZY1A	PCB ASSEMBLY,SUB MB042B DRIVER M/I
571	4930V00283C	HOLDER,DRIVER & SIRROCO SECC RN-48SZ40H
572	4814V00384J	SHIELD,COVER 44/52SZ50 NON SECC(EGI) DRIVER
580	5900V12006B	FAN,DC B1232S06B2-AA DONGYANG 120*120*32 6V 950RPM DC5-8V 7.8CFM
582	4810V00817F	BRACKET,SUPPORTER RN-44SZ55L NB03JA ABS, AF-303S .
583	4850V00012Q	CUSHION,SPONGE 117X114X4T POLYURETHAN SP.DUST
584	3550V00281B	COVER,ABS AF-303S INLET FAN
600	3141VSN656A	CHASSIS ASSEMBLY,SUB NB03JA RN-52SZ50H OPTICAL ENGINE
601	4980V00897C	SUPPORTER,SMPS EGI
602	4980V00D12B	SUPPORTER,BASE EGI ENGINE, RU-52SZ81L
603	4810V00811A	BRACKET,DUCT RN-48SZ40H NB03JA ABS COMBO GUIDE DUCT
608	4810V00758A	BRACKET,NB03JA MG COMBMOUNT
610	6912V00006C	LAMP,HIGH PRESSURE MECURY UHP 100W 1.0 PH P22 100V 1A
611	4810V00710A	BRACKET,RN-48SZ40 NON NON LAMP
612	4980V00620E	SUPPORTER,AL LAMP COVER(48SZ80)
620	5900V09008B	FAN,DC G9232S06B2-AA DONGYANG 92*92*32 6V 1300RPM DC5-8V 0.34CFM
630	6871VSN221H	PCB ASSEMBLY,SUB P/AMP MB042A RN/RU-52SZ80L
640	6913V00002C	BALLAST,EUC100 P/11 PHILIPS 100W POWERPACK BALLAST FOR LCD
641	4810V00659A	BRACKET,BALLAST RE-44SZ20 NON ABS NON
650	6871VSME75A	PCB ASSEMBLY,SUB CONT MB042A 80L CONTROL
670	6871VSME03D	PCB ASSEMBLY,SUB MB042A 80L CASE DET
680	6871VSN220B	PCB ASSEMBLY,SUB MB042A SIDE AV DN-44SZ80L
681	3500V00061J	BOARD,AV RU-44SZ80L NB042A ZENITH
700	6871VSME82A	PCB ASSEMBLY,SUB INTER MB042A DN-44SZ80L
720	6871VPMA47Z	PCB ASSEMBLY,POWER SMPS MB-042B AC INPUT M/I RU-52SZ81L
721	4810V00929A	BRACKET,SUPPORTER DN-44SZ51H NB03KB PC-ABS LINE FILTER

EXPLODED VIEW



EXPLODED VIEW PARTS LIST

No.	Part No.	Description
120	6400WESC01A	SPEAKER,WOOFER C080P23K1450 ESTEC WOOFER 8OHM 15/25W 84DB 80 NON
121	6400DESA01A	SPEAKER,TWEETER D016D01K1450 8HMOHM 15/25W 85DB 50 NON
174	6410VUH004A	POWER CORD,UL/CSA3000MM 3P 3000MM HUG BLACK 500MH 7A
300	3090V00575A	CABINET,RN-52SZ80L LCD PJT FRONT
301	4811V00123C	BRACKET ASSEMBLY,GRILLE RU-52SZ81L NON ZENITH BEST BUY
302	3520V00436A	INDICATOR,LED RU-44SZ80L PMMA 3 PHY NON
303	4980V00C04E	SUPPORTER,SCREEN AL RN-52SZ80
304	4980V00C04F	SUPPORTER,SCREEN AL RN-52SZ80
305	3351V00022A	SCREEN ASSEMBLY,RN-52SZ30H 1178*670*3.9 NEW STRUCTURE
306	4980V00A29J	SUPPORTER,SCREEN AL BAR U/L
310	5020V00903A	BUTTON,CONTROL DN-44SZ80L ABS 7KEY XCANVAS
330	5020V00904C	BUTTON,POWER RU-44SZ81L ABS, AF-303S 1KEY ZENITH
400	3808V00471A	BACK COVER,RN-52SZ80L KOREA
401	4980V00B64B	SUPPORTER,PLATE SECC(EGI) RN-52SZ80L
402	3550V00452E	COVER,LAMP RU-52SZ80L HIPS 40AF SPRAY
403	4980V00C41C	SUPPORTER,ENGINE SECC(EGI) FRONT RN-48/52SZ80L
404	3550V00418E	COVER,FAN RN-52SZ80L HIPS 40AF SPRAY LCD
410	3550V00451C	COVER,DN-52SZ82D HIPS 40AF DUST/ NON SPONGE
430	5018V00087B	MIRROR,REFLECTION AVATEC GLASS FRONTSIDE LCD/DLP 52 80 TOOL
431	4980V00B95A	SUPPORTER,MIRROR AL RN-52SZ80L
432	4980V00C07C	SUPPORTER,MIRROR SECC(EGI) LEFT RN-52SZ80L
433	4980V00C06C	SUPPORTER,MIRROR SECC(EGI) RIGHT RN-52SZ80L
434	4930V00380A	HOLDER,MIRROR LOWER PS DN-44SZ80L
501	3210V00165B	FRAME,ABS AF-303S RN-48SZ40H MAIN CHASSIS
502	4980V00A59B	SUPPORTER,SECC(EGI) MAIN FRMAE 44SZ80
503	4811V00125D	BRACKET ASSEMBLY,REAR AV RU-44SZ80L MB042B TERMINAL BOARD
520	6871VMMR46L	PCB ASSEMBLY,MAIN MB042B RU-52SZ80L USA
530	6871VPMA46A	PCB ASSEMBLY,POWER SMPS MB042B RU-44SZ80L MI
540	6871VSME68A	PCB ASSEMBLY,SUB TUNER MB042B RU-44SZ80L
550	6871VSMX04P	PCB ASSEMBLY,SUB DIGITAL MB042B RU-52SZ80L
560	6871VSME84A	PCB ASSEMBLY,SUB CRM MB042A RU-44SZ80L
570	6871VSML01B	PCB ASSEMBLY,SUB MB042A DIRVER 80H
571	4814V00444B	SHIELD,DN-44SZ80L MB042C SECC(EGI) DRIVE BOARD CASE
572	4814V00459J	SHIELD,RN-52SZ80L MB042A SECC(EGI) NON
573	4980V00C36B	SUPPORTER,FAN EGI DN-48SZ70L
580	5900V12006B	FAN,DC B1232S06B2-AA DONGYANG 120*120*32 6V 950RPM DC5-8V 7.8CFM
581	4810V00983B	BRACKET,DN-48SZ70L MB042A NON IN TAKE SIRROCO FAN
600	3141VSN916F	CHASSIS ASSEMBLY,ENGINE MB042B RU-52SZ80L ENGINE ASSY
601	4980V00A20D	SUPPORTER,ENGINE SECC(EGI) RN-48SZ80L
610	6912V00006C	LAMP,HIGH PRESSURE MECURY UHP 100W 1.0 PH P22 PHILIPS 100V 1A
611	4810V00710A	BRACKET,RN-48SZ40 NON NON LAMP
612	4980V00620E	SUPPORTER,AL LAMP COVER(48SZ80)
620	5900V09008B	FAN,DC G9232S06B2-AA 6V 1300RPM DC5-8V 0.34CFM
630	6871VSN221H	PCB ASSEMBLY,SUB P/AMP MB042A RN/RU-52SZ80L
640	6913V00002C	BALLAST,EUC100 P/11 PHILIPS 100W POWERPACK BALLAST FOR LCD
650	6871VSME75A	PCB ASSEMBLY,SUB CONT MB042A 80L CONTROL
670	6871VSME03D	PCB ASSEMBLY,SUB MB042A 80L CASE DET
680	6871VSN220B	PCB ASSEMBLY,SUB MB042A SIDE AV DN-44SZ80L
681	3500V00061J	BOARD,AV RU-44SZ80L NB042A ZENITH
700	6871VSME82A	PCB ASSEMBLY,SUB INTER MB042A DN-44SZ80L
720	6871VPMA47A	PCB ASSEMBLY,POWER SMPS MB042B RU-44SZ80L AC INPUT MI

REPLACEMENT PARTS LIST

For Capacitor & Resistors, the charactors at 2nd and 3rd digit in the P/No. means as follows;
CC, CX, CK, CN : Ceramic
CQ : Polyestor
CE : Electrolytic
RD : Carbon Film
RS : Metal Oxide Film
RN : Metal Film
RF : Fusible

RUN DATE : 2004.12.13

LOCA. NO	PART NO	DESCRIPTION
IC		
IC1	0IZZVC0124A	M37151EFFP 42PIN
IC100	0IPH741400E	74HC14D 14SOP
IC100	0IPMGON013B	MC34063ADR2G SO-8P
IC1000	0IMI623200B	M62320FP 16P
IC1001	0ICTMMI057A	M37151EFFP 42P MICOM
"	0IZZVC0127B	M37151EFFP 42PIN 80L DRIVER MICOM
IC1002	0IKE704200J	KIA7042AF SOT-89 TP 4.2V
IC1003	0IAL242561B	AT24C256W-10SI-2.7V 8P
IC1005	0IMCRTH003A	THC63LVD104A 64P 10BIT LVDS RX
IC1007	0IPRPSH001A	PQ20WZ1U 5P SC63
IC1008	0IMI623520B	M62352GP 20P
IC1009	0IMI623520B	M62352GP 20P
IC101	0IMCRKE006A	KIA278R05PI TO220IS,4P
IC1010	0IMCRSJ001A	SC1565IST-1.8 3P SOT223
IC1011	0IPRPFA006A	RC1117S33T SOT-223
IC1012	0IMCRSB012A	L3E07070K0A BGA 324P VIDEO SIGNAL
IC1013	0IMO324000C	LM324D SO-14 TP OP AMP
IC1014	0IMO324000C	LM324D SO-14 TP OP AMP
IC1015	0IMCRSB013A	L3E01050F0A 32P
IC1016	0IMCRET001A	EL2244CS-T13 8P
IC1017	0IMCRET001A	EL2244CS-T13 8P
IC1018	0IMCRET001A	EL2244CS-T13 8P
IC1019	0IPRPFA006A	RC1117S33T SOT-223
IC102	0IMCRMI070A	M306V7FGFP 100P 16BIT 256K
"	0IMCRMI070B	M306V7FJFP 100P 512K
IC1020	0IMCRSB014A	L3E06110D0A 100P
IC1021	0IPRPFA006A	RC1117S33T SOT-223
IC1022	0IMCRSB014A	L3E06110D0A 100P
IC1023	0IPRPFA006A	RC1117S33T SOT-223
IC1024	0IMCRSB014A	L3E06110D0A 100P
IC1025	0IMO324000C	LM324D SO-14 TP OP AMP
IC1026	0IMO324000C	LM324D SO-14 TP OP AMP
IC103	0IMP242560A	24LC256-I/SM 8P
IC1031	0IMCRTH003A	THC63LVD104A 64P
IC104	0IKE702700D	KIA7027AF 3, SOT-89 TP RESET IC 2.7V
IC105	0IMCRSG010A	ST3232CDR SOP16 RS232
IC106	0IMCRTH002A	THC63LVD103 64P
IC107	0IMCRET002B	EL2250CS-T7 8P
IC1106	0IPRPFA006A	RC1117S33T SOT-223
IC1200	0IPMGKE030A	KIA78R05F 5PIN
IC1201	0IMCRSO025A	CXA2181Q 48P
IC2	0IMCRKE019A	KIA78R33API 4P TO220
IC200	0ISO206900A	CXA2069Q QFP64 BK I2C BUS AV S/W
IC3	0IMCRKE018A	KIA78R05API 4P
IC300	0IIT323000E	VPC3230D C5 80P
IC301	0ISTLSG009A	M74HC123RM13TR 16P
IC302	0IMCRXL003A	XC95144XL-10TQ100C 3.3V
IC305	0IMMRAL014B	AT24C02N-10SI-2.7 8P
IC306	0IMCRAD002A	AD9883AKST-110 80P

LOCA. NO	PART NO	DESCRIPTION
IC307	0IMCRS5003A	SIL169CT100 100P
IC4	0IFA754207A	KA75420ZTA 3P,TO-92 TP 4.2V
IC404	0IMCRKE006A	KIA278R05PI TO220IS,4P
IC405	0IMCRKE006B	KIA278R33PI TO-220IS 4P
IC406	0IMCRKE006B	KIA278R33PI TO-220IS 4P
IC407	0IPMGKE045A	KIA278R25PI 2.5V 2A TO220IS 4P
IC409	0IMCRKE003B	KIA78R12API 4P TO-220IS
IC5	0IMCRAL006A	AT24C16AN-10SI-2.7 8P
IC500	0ICTMLG003C	LGDT1502M LG IC 304P
IC501	0IMMRHY025C	HY57V643220DT-6 86P
IC502	0ITI740000Q	SN74LVC00AD 14SOP
IC503	0ICTMLG013A	LGDT1901A LG IC 24P
IC504	0IMMRHY025C	HY57V643220DT-6 86P
IC600	0IMCRMN014A	MSP3440G QA B8 V3 80
IC601	0ISS455880A	KA4558D 8SOP OP AMP
IC602	0IFA754207A	KA75420ZTA 3P,TO-92 TP 4.2V
IC701	0IMCRKE006B	KIA278R33PI TO-220IS 4P
IC702	0IMCRKE006B	KIA278R33PI TO-220IS 4P
IC702	0ISS416162C	K4S161622E-TC80 50TSOP
IC703	0IPMGKE045A	KIA278R25PI 2.5V 2A TO220IS 4P
IC703	0IMCRNE045A	UPD64011AGM-8ED-A 160P
IC706	0ISA428200A	LA4282 12S 2CHX10W AUDIO AMP
IC809	0IPMGSG018C	LD1086DT15TR 2P
IC810	0IMCRSK004A	SMA-E1017 3P TO220
IC830	0ISH817300B	PC817XF3 4D PHOTO COUPLER
IC850	0ISH302122A	PQ30RV21 TO-220
IC851	0IMCRFA007A	KA431Z 3DIP,TO-92
IC870	0IMCRFA007A	KA431Z 3DIP,TO-92
IC900	0ICTMLG018A	LGDP4410 176P
TRANSISTOR		
Q1	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q100	0TR830009BA	BSS83
Q100	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1000	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1001	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1002	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1003	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1004	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1005	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q101	0TR830009BA	BSS83
Q102	0TR102009AG	CHIP KRC102S KEC TP SOT-23
Q103	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q104	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q105	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q107	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1201	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1202	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1203	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1204	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1205	0TR387500AA	CHIP 2SC3875S(ALY) KEC

REPLACEMENT PARTS LIST

LOCA. NO	PART NO	DESCRIPTION
Q1206	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1208	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q1209	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1210	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q1211	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1213	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1218	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q1219	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1222	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1223	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1224	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1225	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q200	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q201	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q202	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q203	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q204	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q205	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q206	0TR102008AA	KRA102S SOT23 CHIP TR
Q207	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q208	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q209	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q210	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q211	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q212	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q302	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q305	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q306	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q307	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q308	0TR830009BA	BSS83
Q309	0TR830009BA	BSS83
Q310	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q311	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q600	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q601	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q602	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q603	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q604	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q701	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q703	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q704	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q801	0TFSG10004A	STW20NK50Z ST TO-247 500V 17A
Q830	0TFSG10003A	STW8NK80Z ST TO-247 800V 6.2A
Q832	0TR437000BA	KTC4370A-Y TO-220IS KEC
Q840	0TR322709AA	KTC3227-Y,TP(KTC1627A),KEC
Q852	0TR945009AA	KSC945C-Y TO92 50V 150MA
Q871	0TR102409AB	KTA1024-Y (KTA949) TP KEC
Q872	0TR322709AA	KTC3227-Y,TP(KTC1627A),KEC
DIODE		
D1	0DLLT0260AA	LED,LTL-30EWJ
D1	0DD184009AA	KDS184S CHIP 85V 300MA KEC TP
D100	0DRDI00148A	B140A 40V 1A 30A .SEC 0.5MA
D100	0DRSE00038A	SDC15 TVS SOT23 12.8V

LOCA. NO	PART NO	DESCRIPTION
D102	0DR050008AA	SD05.TC SOD323 5V 5A 15A
D103	0DR050008AA	SD05.TC SOD323 5V 5A 15A
D104	0DR050008AA	SD05.TC SOD323 5V 5A 15A
D105	0DRSE00038A	SDC15 TVS SOT23 12.8V
D106	0DR050008AA	SD05.TC SOD323 5V 5A 15A
D2	0DLLT0260AA	LED,LTL-30EWJ
D201	0DD414809ED	1N4148 TP GRANDE
D3	0DLLT0260AA	LED,LTL-30EWJ
D3	0DD226239AA	CHIP KDS226 SOT-23
D300	0DD184009AA	KDS184S CHIP 85V 300MA KEC TP
D4	0DD184009AA	KDS184S CHIP 85V 300MA KEC TP
D5	0DD184009AA	KDS184S CHIP 85V 300MA KEC TP
D6	0DD184009AA	KDS184S CHIP 85V 300MA KEC TP
D700	0DS113379BA	1SS133 T-72 DO34 90V
D701	0DS113379BA	1SS133 T-72 DO34 90V
D702	0DS113379BA	1SS133 T-72 DO34 90V
D703	0DS113379BA	1SS133 T-72 DO34 90V
D704	0DS113379BA	1SS133 T-72 DO34 90V
D706	0DS113379BA	1SS133 T-72 DO34 90V
D707	0DS113379BA	1SS133 T-72 DO34 90V
D708	0DS113379BA	1SS133 T-72 DO34 90V
D709	0DS113379BA	1SS133 T-72 DO34 90V
D710	0DD184009AA	KDS184S CHIP 85V 300MA KEC TP
D711	0DD184009AA	KDS184S CHIP 85V 300MA KEC TP
D712	0DD184009AA	KDS184S CHIP 85V 300MA KEC TP
D801	0DD606000AA	RBV606 600V 6A 150A NA 10UA
D831	0DD100009AU	EU1AV(1) TP SANKEN TP SANKEN
D832	0DD100009AU	EU1AV(1) TP SANKEN TP SANKEN
D834	0DR010009AA	EG01C 1000V 0.5A 10A 100NSEC 50UA
D835	0DD414809ED	1N4148 TP GRANDE
D840	0DD414809ED	1N4148 TP GRANDE
D851	0DD220000AC	FML-G22S 200V 10A 150A
“	0DD120000BB	FML-G12S
D861	0DD220000AC	FML-G22S 200V 10A 150A
“	0DD120000BB	FML-G12S
D881	0DD220000AC	FML-G22S 200V 10A 150A
“	0DD120000BB	FML-G12S
D891	0DRSA00170A	FML-G14S TO220 400V 5A
Q801	0DR360000AA	FMG-36S 2.2V 100NSEC 1.0MA
ZD01	0DR050008AA	SD05.TC SOD323 5V 5A 15A
ZD1	0DZ620009BB	ZENERS,MTZJ6.2B
ZD10	0DZ620009BB	ZENERS,MTZJ6.2B
ZD2	0DZ620009BB	ZENERS,MTZJ6.2B
ZD201	0DZ560009CF	ZENERS,MTZJ5.6B
ZD202	0DZ560009CF	ZENERS,MTZJ5.6B
ZD203	0DZ560009CF	ZENERS,MTZJ5.6B
ZD204	0DZ560009CF	ZENERS,MTZJ5.6B
ZD3	0DZ620009BB	ZENERS,MTZJ6.2B
ZD4	0DZ620009BB	ZENERS,MTZJ6.2B
ZD5	0DZ620009BB	ZENERS,MTZJ6.2B
ZD6	0DZ620009BB	ZENERS,MTZJ6.2B
ZD600	0DZ560009CF	ZENERS,MTZJ5.6B
ZD601	0DZ560009CF	ZENERS,MTZJ5.6B
ZD839	0DZ300009BB	ZENERS,MTZJ30B

REPLACEMENT PARTS LIST

LOCA. NO	PART NO	DESCRIPTION
ZD9	0DZ620009BB	ZENERS,MTZJ6.2B
CAPACITOR		
C1	0CE476DF618	47UF STD 16V M
C1	0CE226DF618	22UF STD 16V M
C100	0CE106SF6DC	10UF MVG 16V 20%
C100	0CE475DK618	4.7UF STD 50V 20%
C1003	0CC180CKH1A	18PF 1608 50V 5%
C1004	0CC180CKH1A	18PF 1608 50V 5%
C1005	0CK103CK56A	0.01UF 1608 50V 10%
C1006	0CK103CK56A	0.01UF 1608 50V 10%
C1007	0CE105VK6DC	1UF MV 50V 20%
C1008	0CK103CK56A	0.01UF 1608 50V 10%
C1009	0CE226SF6DC	22UF MVG 16V 20%
C101	0CE226SF6DC	22UF MVG 16V 20%
C101	0CE106DF618	10UF STD 16V M
C1013	0CK103CK56A	0.01UF 1608 50V 10%
C1014	0CE226SF6DC	22UF MVG 16V 20%
C1015	0CE226SF6DC	22UF MVG 16V 20%
C1016	0CK103CK56A	0.01UF 1608 50V 10%
C1017	0CE226SF6DC	22UF MVG 16V 20%
C1018	0CK103CK56A	0.01UF 1608 50V 10%
C1019	0CK103CK56A	0.01UF 1608 50V 10%
C1020	0CK103CK56A	0.01UF 1608 50V 10%
C1021	0CK103CK56A	0.01UF 1608 50V 10%
C1022	0CK103CK56A	0.01UF 1608 50V 10%
C1023	0CE226SF6DC	22UF MVG 16V 20%
C1024	0CK103CK56A	0.01UF 1608 50V 10%
C1025	0CK103CK56A	0.01UF 1608 50V 10%
C1026	0CE107VH6DC	100UF MV 25V 20%
C1029	0CK103CK56A	0.01UF 1608 50V 10%
C103	0CK105DF64A	1UF 2012 16V 20%
C1030	0CE107SF6DC	100UF MVG 16V M
C1031	0CK103CK56A	0.01UF 1608 50V 10%
C1033	0CK103CK56A	0.01UF 1608 50V 10%
C1034	0CE226SH6DC	22UF MVG 25V 20%
“	0CE476VH6DC	47UF MV 25V 20%
C1035	0CK103CK56A	0.01UF 1608 50V 10%
“	0CC102CK41A	1000PF 1608 50V 5%
C1037	0CE476SF6DC	47UF MVG 16V M
C1038	0CE476SF6DC	47UF MVG 16V M
C1039	0CE476SF6DC	47UF MVG 16V M
C1050	0CK103CK56A	0.01UF 1608 50V 10%
C1051	0CK103CK56A	0.01UF 1608 50V 10%
C1052	0CE226SF6DC	22UF MVG 16V 20%
C1053	0CK103CK56A	0.01UF 1608 50V 10%
C1054	0CE226SF6DC	22UF MVG 16V 20%
C1055	0CK103CK56A	0.01UF 1608 50V 10%
C1056	0CE226SF6DC	22UF MVG 16V 20%
C1057	0CK103CK56A	0.01UF 1608 50V 10%
C1058	0CK103CK56A	0.01UF 1608 50V 10%
C1059	0CK103CK56A	0.01UF 1608 50V 10%
C1060	0CK103CK56A	0.01UF 1608 50V 10%
C1061	0CK103CK56A	0.01UF 1608 50V 10%

LOCA. NO	PART NO	DESCRIPTION
C1062	0CK103CK56A	0.01UF 1608 50V 10%
C1063	0CK103CK56A	0.01UF 1608 50V 10%
C1064	0CK103CK56A	0.01UF 1608 50V 10%
C1065	0CE226SF6DC	22UF MVG 16V 20%
C1066	0CE226SF6DC	22UF MVG 16V 20%
C1067	0CK103CK56A	0.01UF 1608 50V 10%
C1068	0CK103CK56A	0.01UF 1608 50V 10%
C1069	0CK103CK56A	0.01UF 1608 50V 10%
C1070	0CK103CK56A	0.01UF 1608 50V 10%
C1071	0CK103CK56A	0.01UF 1608 50V 10%
C1072	0CK103CK56A	0.01UF 1608 50V 10%
C1073	0CK103CK56A	0.01UF 1608 50V 10%
C1074	0CK103CK56A	0.01UF 1608 50V 10%
C1075	0CK103CK56A	0.01UF 1608 50V 10%
C1076	0CE226SF6DC	22UF MVG 16V 20%
C1077	0CK103CK56A	0.01UF 1608 50V 10%
C1078	0CK103CK56A	0.01UF 1608 50V 10%
C1081	0CK103CK56A	0.01UF 1608 50V 10%
C1082	0CE226SH6DC	22UF MVG 25V 20%
“	0CE476VH6DC	47UF MV 25V 20%
C1083	0CK103CK56A	0.01UF 1608 50V 10%
C1084	0CE226SH6DC	22UF MVG 25V 20%
“	0CE476VH6DC	47UF MV 25V 20%
C1085	0CE226SF6DC	22UF MVG 16V 20%
C1086	0CK103CK56A	0.01UF 1608 50V 10%
C1087	0CK103CK56A	0.01UF 1608 50V 10%
C1088	0CK103CK56A	0.01UF 1608 50V 10%
C1089	0CK103CK56A	0.01UF 1608 50V 10%
C109	0CE226SF6DC	22UF MVG 16V 20%
C1090	0CK103CK56A	0.01UF 1608 50V 10%
C1091	0CK103CK56A	0.01UF 1608 50V 10%
C1092	0CK103CK56A	0.01UF 1608 50V 10%
C1093	0CK103CK56A	0.01UF 1608 50V 10%
C1094	0CK103CK56A	0.01UF 1608 50V 10%
C1095	0CE226SH6DC	22UF MVG 25V 20%
C1096	0CK103CK56A	0.01UF 1608 50V 10%
C1097	0CK103CK56A	0.01UF 1608 50V 10%
C1098	0CK103CK56A	0.01UF 1608 50V 10%
C1099	0CK103CK56A	0.01UF 1608 50V 10%
C110	0CE106DF618	10UF STD 16V M
C1100	0CE226SH6DC	22UF MVG 25V 20%
C1101	0CE226SF6DC	22UF MVG 16V 20%
“	0CE476SF6DC	47UF MVG 16V M
C111	0CE476DF618	47UF STD 16V M
C1111	0CK103CK56A	0.01UF 1608 50V 10%
C1112	0CE226SH6DC	22UF MVG 25V 20%
C1113	0CK103CK56A	0.01UF 1608 50V 10%
C1114	0CE226SH6DC	22UF MVG 25V 20%
C112	0CE107DF618	100UF STD 16V M
C1121	0CK103CK56A	0.01UF 1608 50V 10%
C1122	0CK103CK56A	0.01UF 1608 50V 10%
C1123	0CE476SF6DC	47UF MVG 16V M
“	0CE476VH6DC	47UF MV 25V 20%
C1124	0CK103CK56A	0.01UF 1608 50V 10%

REPLACEMENT PARTS LIST

LOCA. NO	PART NO	DESCRIPTION
C1125	0CK103CK56A	0.01UF 1608 50V 10%
C1126	0CE226SF6DC	22UF MVG 16V 20%
“	0CE476SF6DC	47UF MVG 16V M
C1127	0CK103CK56A	0.01UF 1608 50V 10%
C1128	0CK103CK56A	0.01UF 1608 50V 10%
C1129	0CK103CK56A	0.01UF 1608 50V 10%
C113	0CK105DF64A	1UF 2012 16V 20%
C1130	0CK103CK56A	0.01UF 1608 50V 10%
“	0CC102CK41A	1000PF 1608 50V 5%
C1131	0CK103CK56A	0.01UF 1608 50V 10%
C1132	0CK103CK56A	0.01UF 1608 50V 10%
C1133	0CK103CK56A	0.01UF 1608 50V 10%
C1134	0CK103CK56A	0.01UF 1608 50V 10%
C1135	0CK103CK56A	0.01UF 1608 50V 10%
C1136	0CK103CK56A	0.01UF 1608 50V 10%
C1137	0CK103CK56A	0.01UF 1608 50V 10%
C1138	0CK103CK56A	0.01UF 1608 50V 10%
C1139	0CE226SH6DC	22UF MVG 25V 20%
“	0CE476VH6DC	47UF MV 25V 20%
C1140	0CK103CK56A	0.01UF 1608 50V 10%
C1141	0CK103CK56A	0.01UF 1608 50V 10%
C1142	0CE226SF6DC	22UF MVG 16V 20%
“	0CE476SF6DC	47UF MVG 16V M
C1143	0CK103CK56A	0.01UF 1608 50V 10%
C1144	0CK103CK56A	0.01UF 1608 50V 10%
C1145	0CE226SF6DC	22UF MVG 16V 20%
C1146	0CE107SF6DC	100UF MVG 16V M
C1147	0CK103CK56A	0.01UF 1608 50V 10%
C1148	0CK103CK56A	0.01UF 1608 50V 10%
C1149	0CK103CK56A	0.01UF 1608 50V 10%
C115	0CE106DF618	10UF STD 16V M
C1150	0CK103CK56A	0.01UF 1608 50V 10%
C1151	0CE226SH6DC	22UF MVG 25V 20%
C1156	0CK103CK56A	0.01UF 1608 50V 10%
C1157	0CK103CK56A	0.01UF 1608 50V 10%
C1158	0CE476SF6DC	47UF MVG 16V M
“	0CE476VH6DC	47UF MV 25V 20%
C1159	0CK103CK56A	0.01UF 1608 50V 10%
C116	0CE476BK618	47UF KME 50V M
C1160	0CK103CK56A	0.01UF 1608 50V 10%
C1161	0CE226SF6DC	22UF MVG 16V 20%
“	0CE476SF6DC	47UF MVG 16V M
C1162	0CK103CK56A	0.01UF 1608 50V 10%
C1163	0CK103CK56A	0.01UF 1608 50V 10%
C1164	0CK103CK56A	0.01UF 1608 50V 10%
C1165	0CK103CK56A	0.01UF 1608 50V 10%
“	0CC102CK41A	1000PF 1608 50V 5%
C1166	0CK103CK56A	0.01UF 1608 50V 10%
C1167	0CK103CK56A	0.01UF 1608 50V 10%
C1168	0CK103CK56A	0.01UF 1608 50V 10%
C1169	0CK103CK56A	0.01UF 1608 50V 10%
C117	0CE476DF618	47UF STD 16V M
C1170	0CK103CK56A	0.01UF 1608 50V 10%
C1171	0CK103CK56A	0.01UF 1608 50V 10%

LOCA. NO	PART NO	DESCRIPTION
C1172	0CK103CK56A	0.01UF 1608 50V 10%
C1173	0CE226SH6DC	22UF MVG 25V 20%
“	0CE476VH6DC	47UF MV 25V 20%
C1174	0CK103CK56A	0.01UF 1608 50V 10%
C1175	0CK103CK56A	0.01UF 1608 50V 10%
C1176	0CE226SF6DC	22UF MVG 16V 20%
“	0CE476SF6DC	47UF MVG 16V M
C1177	0CE226SF6DC	22UF MVG 16V 20%
C1178	0CK103CK56A	0.01UF 1608 50V 10%
C1179	0CK103CK56A	0.01UF 1608 50V 10%
C118	0CE107DF618	100UF STD 16V M
C1180	0CE107SF6DC	100UF MVG 16V M
C1181	0CK103CK56A	0.01UF 1608 50V 10%
C1182	0CK103CK56A	0.01UF 1608 50V 10%
C1183	0CK103CK56A	0.01UF 1608 50V 10%
C1184	0CK103CK56A	0.01UF 1608 50V 10%
C1185	0CE226SH6DC	22UF MVG 25V 20%
C1190	0CK103CK56A	0.01UF 1608 50V 10%
C1191	0CK103CK56A	0.01UF 1608 50V 10%
C1192	0CE476SF6DC	47UF MVG 16V M
“	0CE476VH6DC	47UF MV 25V 20%
C1193	0CK103CK56A	0.01UF 1608 50V 10%
C1194	0CK103CK56A	0.01UF 1608 50V 10%
C1195	0CE226SF6DC	22UF MVG 16V 20%
C1196	0CK103CK56A	0.01UF 1608 50V 10%
C1197	0CK103CK56A	0.01UF 1608 50V 10%
C1198	0CK103CK56A	0.01UF 1608 50V 10%
C1199	0CK103CK56A	0.01UF 1608 50V 10%
“	0CC102CK41A	1000PF 1608 50V 5%
C120	0CE107DF618	100UF STD 16V M
C1200	0CK103CK56A	0.01UF 1608 50V 10%
C1200	0CE106VF6DC	10UF MV 16V 20%
C1201	0CK103CK56A	0.01UF 1608 50V 10%
C1201	0CE106VF6DC	10UF MV 16V 20%
C1202	0CE226SF6DC	22UF MVG 16V 20%
“	0CE476SF6DC	47UF MVG 16V M
C1203	0CK103CK56A	0.01UF 1608 50V 10%
C1203	0CE106VF6DC	10UF MV 16V 20%
C1204	0CE226SF6DC	22UF MVG 16V 20%
“	0CE476SF6DC	47UF MVG 16V M
C1204	0CE106VF6DC	10UF MV 16V 20%
C1205	0CK103CK56A	0.01UF 1608 50V 10%
C1206	0CE107SF6DC	100UF MVG 16V M
C1206	0CE106VF6DC	10UF MV 16V 20%
C1207	0CK103CK56A	0.01UF 1608 50V 10%
C1207	0CE106VF6DC	10UF MV 16V 20%
C1208	0CK103CK56A	0.01UF 1608 50V 10%
C1208	0CE106VF6DC	10UF MV 16V 20%
C1209	0CK103CK56A	0.01UF 1608 50V 10%
C1209	0CE106VF6DC	10UF MV 16V 20%
C121	0CK105DF64A	1UF 2012 16V 20%
C1210	0CK103CK56A	0.01UF 1608 50V 10%
C1211	0CE226SH6DC	22UF MVG 25V 20%
C1213	0CE106VF6DC	10UF MV 16V 20%

REPLACEMENT PARTS LIST

LOCA. NO	PART NO	DESCRIPTION
C1214	0CE227VF6DC	220UF MV 16V 20%
C1217	0CE107SF6DC	100UF MVG 16V M
C1220	0CK103CK56A	0.01UF 1608 50V 10%
C1221	0CE476SF6DC	47UF MVG 16V M
“	0CE226SF6DC	22UF MVG 16V 20%
C1223	0CK103CK56A	0.01UF 1608 50V 10%
C1224	0CK103CK56A	0.01UF 1608 50V 10%
C1225	0CK103CK56A	0.01UF 1608 50V 10%
C1226	0CK103CK56A	0.01UF 1608 50V 10%
C1227	0CK103CK56A	0.01UF 1608 50V 10%
C1228	0CK103CK56A	0.01UF 1608 50V 10%
C1229	0CK103CK56A	0.01UF 1608 50V 10%
C123	0CE107DK618	100UF STD 50V M
C1230	0CK103CK56A	0.01UF 1608 50V 10%
C1231	0CK103CK56A	0.01UF 1608 50V 10%
C1232	0CK103CK56A	0.01UF 1608 50V 10%
C1233	0CE226SH6DC	22UF MVG 25V 20%
“	0CE476VH6DC	47UF MV 25V 20%
C1234	0CK103CK56A	0.01UF 1608 50V 10%
C1235	0CK103CK56A	0.01UF 1608 50V 10%
C1241	0CE226SF6DC	22UF MVG 16V 20%
“	0CC102CK41A	1000PF 1608 50V 5%
C1242	0CK103CK56A	0.01UF 1608 50V 10%
C1243	0CE226SF6DC	22UF MVG 16V 20%
C1244	0CK103CK56A	0.01UF 1608 50V 10%
“	0CC101CK41A	100PF 1608 50V 5%
C1244	0CK105DF64A	1UF 2012 16V 20%
C1245	0CK103CK56A	0.01UF 1608 50V 10%
“	0CC101CK41A	100PF 1608 50V 5%
C1246	0CE226SF6DC	22UF MVG 16V 20%
“	0CC101CK41A	100PF 1608 50V 5%
C1246	0CE476SF6DC	47UF MVG 16V M
C1247	0CK103CK56A	0.01UF 1608 50V 10%
C1248	0CE226SF6DC	22UF MVG 16V 20%
C1249	0CK103CK56A	0.01UF 1608 50V 10%
C1249	0CE476SF6DC	47UF MVG 16V M
C1250	0CK103CK56A	0.01UF 1608 50V 10%
C1251	0CK103CK56A	0.01UF 1608 50V 10%
C1252	0CK103CK56A	0.01UF 1608 50V 10%
C1257	0CE476SF6DC	47UF MVG 16V M
C1259	0CE476SF6DC	47UF MVG 16V M
C126	0CE476BK618	47UF KME 50V M
C1260	0CK105DF64A	1UF 2012 16V 20%
C1261	0CK105DF64A	1UF 2012 16V 20%
C1262	0CK103CK56A	0.01UF 1608 50V 10%
C1263	0CE226SH6DC	22UF MVG 25V 20%
C129	0CE106SF6DC	10UF MVG 16V 20%
C130	0CE106SF6DC	10UF MVG 16V 20%
C1308	0CK103CK56A	0.01UF 1608 50V 10%
C1309	0CE476SF6DC	47UF MVG 16V M
C1314	0CK103CK56A	0.01UF 1608 50V 10%
C1315	0CE226SH6DC	22UF MVG 25V 20%
C132	0CE475DK618	4.7UF STD 50V 20%
C1324	0CE226SF6DC	22UF MVG 16V 20%

LOCA. NO	PART NO	DESCRIPTION
C1325	0CK103CK56A	0.01UF 1608 50V 10%
C1326	0CE226SF6DC	22UF MVG 16V 20%
C1327	0CK103CK56A	0.01UF 1608 50V 10%
C1331	0CE226SF6DC	22UF MVG 16V 20%
C1332	0CK103CK56A	0.01UF 1608 50V 10%
C1333	0CE226SF6DC	22UF MVG 16V 20%
C1334	0CK103CK56A	0.01UF 1608 50V 10%
C1338	0CE226SF6DC	22UF MVG 16V 20%
C1339	0CK103CK56A	0.01UF 1608 50V 10%
C134	0CE476DF618	47UF STD 16V M
C1340	0CE226SF6DC	22UF MVG 16V 20%
C1341	0CK103CK56A	0.01UF 1608 50V 10%
C136	0CE476BK618	47UF KME 50V M
C139	0CE106SF6DC	10UF MVG 16V 20%
C145	0CE106SF6DC	10UF MVG 16V 20%
C147	0CE107DF618	100UF STD 16V M
C149	0CE107DH618	100UF STD 25V M
C15	0CK105DF64A	1UF 2012 16V 20%
C150	0CE106SF6DC	10UF MVG 16V 20%
C151	0CE475DK618	4.7UF STD 50V 20%
C162	0CE226SF6DC	22UF MVG 16V 20%
C2	0CN1030F679	10000PF D 16V 20%
C20	0CE107DH618	100UF STD 25V M
C200	0CE476SF6DC	47UF MVG 16V M
C200	0CK105DF64A	1UF 2012 16V 20%
C201	0CK105DF64A	1UF 2012 16V 20%
C202	0CE106SF6DC	10UF MVG 16V 20%
C203	0CE476SF6DC	47UF MVG 16V M
C203	0CK105DF64A	1UF 2012 16V 20%
C204	0CK105DF64A	1UF 2012 16V 20%
C205	0CE106SF6DC	10UF MVG 16V 20%
C205	0CK105DF64A	1UF 2012 16V 20%
C206	0CE106SF6DC	10UF MVG 16V 20%
C207	0CE106SF6DC	10UF MVG 16V 20%
C207	0CK105DF64A	1UF 2012 16V 20%
C208	0CK105DF64A	1UF 2012 16V 20%
C209	0CE106SF6DC	10UF MVG 16V 20%
C209	0CK105DF64A	1UF 2012 16V 20%
C210	0CE106SF6DC	10UF MVG 16V 20%
C210	0CK105DF64A	1UF 2012 16V 20%
C211	0CK224DF56A	220000PF 2012 16V 10%
C211	0CK105DF64A	1UF 2012 16V 20%
C212	0CK224DF56A	220000PF 2012 16V 10%
C212	0CK105DF64A	1UF 2012 16V 20%
C213	0CK224DF56A	220000PF 2012 16V 10%
C213	0CK105DF64A	1UF 2012 16V 20%
C214	0CK224DF56A	220000PF 2012 16V 10%
C214	0CK105DF64A	1UF 2012 16V 20%
C215	0CK224DF56A	220000PF 2012 16V 10%
C215	0CK105DF64A	1UF 2012 16V 20%
C216	0CK224DF56A	220000PF 2012 16V 10%
C217	0CK224DF56A	220000PF 2012 16V 10%
C219	0CE106SF6DC	10UF MVG 16V 20%
C223	0CE475DK618	4.7UF STD 50V 20%

REPLACEMENT PARTS LIST

LOCA. NO	PART NO	DESCRIPTION
C224	0CE476SF6DC	47UF MVG 16V M
C225	0CE475DK618	4.7UF STD 50V 20%
C226	0CE227DF618	220UF STD 16V M
C227	0CK105DF64A	1UF 2012 16V 20%
C229	0CE226DF618	22UF STD 16V M
C23	0CE107DF618	100UF STD 16V M
C231	0CE107DF618	100UF STD 16V M
C237	0CK224DF56A	220000PF 2012 16V 10%
C238	0CE476SF6DC	47UF MVG 16V M
C24	0CE476DF618	47UF STD 16V M
C249	0CE106SF6DC	10UF MVG 16V 20%
C260	0CE106SF6DC	10UF MVG 16V 20%
C261	0CE106SF6DC	10UF MVG 16V 20%
C262	0CE106SF6DC	10UF MVG 16V 20%
C27	0CE476DF618	47UF STD 16V M
C335	0CE106SF6DC	10UF MVG 16V 20%
C338	0CE106SF6DC	10UF MVG 16V 20%
C339	0CE106SF6DC	10UF MVG 16V 20%
C344	0CE226SF6DC	22UF MVG 16V 20%
C345	0CE226SF6DC	22UF MVG 16V 20%
C358	0CE226SF6DC	22UF MVG 16V 20%
C359	0CE226SF6DC	22UF MVG 16V 20%
C363	0CK823DK56A	82000PF 2012 50V 10%
C381	0CE226SF6DC	22UF MVG 16V 20%
C394	0CE226SF6DC	22UF MVG 16V 20%
C395	0CE226SF6DC	22UF MVG 16V 20%
C405	0CE226SF6DC	22UF MVG 16V 20%
C5	0CK105DF64A	1UF 2012 16V 20%
C508	0CE226SF6DC	22UF MVG 16V 20%
C510	0CE226SF6DC	22UF MVG 16V 20%
C550	0CE106SF6DC	10UF MVG 16V 20%
C565	0CE106SF6DC	10UF MVG 16V 20%
C571	0CE106SF6DC	10UF MVG 16V 20%
C606	0CE107DF618	100UF STD 16V M
C616	0CE107DF618	100UF STD 16V M
C621	0CK105DF64A	1UF 2012 16V 20%
C622	0CK105DF64A	1UF 2012 16V 20%
C628	0CE106DF618	10UF STD 16V M
C630	0CE106DF618	10UF STD 16V M
C631	0CE107DF618	100UF STD 16V M
C643	0CE476DF618	47UF STD 16V M
C648	0CE335DK618	3.3UF STD 50V 20%
C664	0CE335DK618	3.3UF STD 50V 20%
C668	0CK105DF64A	1UF 2012 16V 20%
C669	0CK105DF64A	1UF 2012 16V 20%
C670	0CE475DK618	4.7UF STD 50V 20%
C671	0CE475DK618	4.7UF STD 50V 20%
C673	0CE335DK618	3.3UF STD 50V 20%
C7	0CE227DF618	220UF STD 16V M
C703	0CE107DD618	100UF STD 10V M
C705	0CE227DF618	220UF STD 16V M
C707	0CE227DD618	220UF STD 10V M
C709	0CE227DD618	220UF STD 10V M
C711	0CE227DD618	220UF STD 10V M

LOCA. NO	PART NO	DESCRIPTION
C713	0CE227DD618	220UF STD 10V M
C714	0CE476SF6DC	47UF MVG 16V M
C715	0CE227DD618	220UF STD 10V M
C715	0CE476SF6DC	47UF MVG 16V M
C718	0CE476SF6DC	47UF MVG 16V M
C719	0CE476SF6DC	47UF MVG 16V M
C720	0CE227DH618	220UF STD 25V M
C722	0CE107DF618	100UF STD 16V M
C724	0CQ1041N509	0.1UF D 100V 10%
C725	0CE108DK61A	1000UF STD 50V M
C726	0CE476SF6DC	47UF MVG 16V M
C727	0CE106DF618	10UF STD 16V M
C727	0CE476SF6DC	47UF MVG 16V M
C728	0CQ1041N509	0.1UF D 100V 10%
C729	0CE107DH618	100UF STD 25V M
C730	0CE106DK618	10UF STD 50V M
C730	0CE476SF6DC	47UF MVG 16V M
C731	0CE107DH618	100UF STD 25V M
C732	0CE106DK618	10UF STD 50V M
C732	0CE105VK6DC	1UF MV 50V 20%
C733	0CE107DH618	100UF STD 25V M
C733	0CE106SF6DC	10UF MVG 16V 20%
C734	0CE106DF618	10UF STD 16V M
C734	0CE476SF6DC	47UF MVG 16V M
C735	0CQ6821N509	0.0068UF D 100V 10%
C736	0CE106DF618	10UF STD 16V M
C737	0CQ6821N509	0.0068UF D 100V 10%
C739	0CE108DJ618	1000UF STD 35V M
C741	0CE108DJ618	1000UF STD 35V M
C742	0CE106DF618	10UF STD 16V M
C743	0CE108DF618	1000UF STD 16V M
C758	0CE107DD618	100UF STD 10V M
C801	0CQZVBK002C	A.C 275V 0.22UF K (S=22.5)
C801	181-091J	DEHR33D821KN3A 820PF 2KV 10%,-10%
C803	0CQZVBK002C	A.C 275V 0.22UF K (S=22.5)
C805	0CF1050W470	1UF 0 500V 5%
C807	0CK10202510	1000P 2KV K B S
C808	0CK10202510	1000P 2KV K B S
C810	0CK1030K945	0.01UF 50V Z F TR
C811	0CK4730K945	0.047UF D 50V 80%,-20%
C812	181-007H	MPE ECQ-V1H474JL3(TR), 50V 0.47UF J
C813	0CK1010K515	100P 50V K B TS
C814	0CK4710K515	470PF 50V K B TR
C815	0CK1010K515	100P 50V K B TS
C816	0CK1020K515	1000P 50V K B TS
C820	181-001K	CE 450V 220UF M LUG(105)
C822	0CE476SF6DC	47UF MVG 16V M
C824	0CE106SF6DC	10UF MVG 16V 20%
C825	0CE476SF6DC	47UF MVG 16V M
C827	0CE476SF6DC	47UF MVG 16V M
C829	0CE476SF6DC	47UF MVG 16V M
C831	0CE476BK618	47UF KME 50V M
C832	0CE107DJ618	100UF STD 35V M
C833	0CC1000K115	10P 50V D NP0 TS

REPLACEMENT PARTS LIST

LOCA. NO	PART NO	DESCRIPTION
C834	0CK1040K945	0.1UF 50V Z F TR
C835	0CE226SF6DC	22UF MVG 16V 20%
C836	181-011B	0.001UF D 1.6KV J
C837	181-091N	SL 100PF 1KV 10%,-10%
C840	0CK1040K945	0.1UF 50V Z F TR
C841	0CK1040K945	0.1UF 50V Z F TR
C842	0CK1040K945	0.1UF 50V Z F TR
C843	0CE476BK618	47UF KME 50V M
C844	0CE476BK618	47UF KME 50V M
C851	0CE108DH618	1000UF STD 25V M
C852	0CE227DH618	220UF STD 25V M
C853	181-091Q	R 470PF 1KV 10%,-10%
C857	0CE105DK618	1UF STD 50V M
C861	0CE108DF618	1000UF STD 16V M
C862	0CE477DF618	470UF STD 16V 20%
C863	181-091Q	R 470PF 1KV 10%,-10%
C866	181-091N	SL 100PF 1KV 10%,-10%
C867	181-091N	SL 100PF 1KV 10%,-10%
C868	181-091N	SL 100PF 1KV 10%,-10%
C870	0CK1040K945	0.1UF 50V Z F TR
C874	0CE475BK618	4.7UF KME TYPE 50V 20%
C881	0CE2286F618	2200U SMS 16V M
C882	0CE477DF618	470UF STD 16V 20%
C883	181-091Q	R 470PF 1KV 10%,-10%
C891	0CE108BK61A	1000UF KME 50V M
C892	0CE2276K618	220M SMS 50V M
C893	181-091Q	R 470PF 1KV 10%,-10%
C898	181-120L	3300PF 4KV M
C899	181-035U	DE1B3KX471KA5B 470PF 250V 10%
C915	0CE476SF6DC	47UF MVG 16V M
C923	0CE476SF6DC	47UF MVG 16V M
JACK		
JA1201	6613V00013G	JACK ASSEMBLY,PMJ021G 9P
JA1202A	6612VJH006C	JACK,RCA PJ6061E 6P
JA200	6613V00013B	JACK ASSY,PMJ021B 9P
JA201	380-404A	JACK,DIN PHSJ-9504
JA201	6613V00010B	JACK ASSY,PMJ016B 3P
P1001	6612BBBHN7A	JACK,DIN 74320-3004 30PIN
COIL & TRANSFORMER		
L1	0LA0102K119	INDUCTOR,10UH K
L100	6140VB0023A	COIL,CHOKE SB7032-751 750UH
L1001	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1002	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1003	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1004	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1005	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1006	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1007	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1010	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L1011	6140VB0003A	COIL,CHOKE LQH31CN4R7M01L 4.7UH
L861	150-C02F	COIL,CHOKE 82UH
L881	150-C02F	COIL,CHOKE 82UH

LOCA. NO	PART NO	DESCRIPTION
L891	150-C02F	COIL,CHOKE 82UH
T801	6170VMCA06N	TRANSFORMER,SMPS[COIL] EER4220 360UH
T830	6170VMCA13T	TRANSFORMER,SMPS[COIL] EER4215 660UH
CONNECTOR		
JA1200	6630TGA004F	CONNECTOR,D-SUB 15P 2.29MM
P10	6630BX05007	CONNECTOR,DRAWING 5PIN 1.25MM
P100	6630B60F532	CONNECTOR ,32P 2.54MM
P1005	6630VZS001C	CONNECTOR,DRAWING 36PIN
P1006	6630VZS001C	CONNECTOR,DRAWING 36PIN
P101	6630B60F532	CONNECTOR ,32P 2.54MM
P101A	6630B60F432	CONNECTOR ,32P 2.54MM
P101B	6630B60F532	CONNECTOR ,32P 2.54MM
P102	6630GZ00724	CONNECTOR ,D-SUB 24P 1.91MM
P102A	6630B60F432	CONNECTOR ,32P 2.54MM
P102B	6630B60F532	CONNECTOR ,32P 2.54MM
P104	6630VGA004B	CONNECTOR ,D-SUB 9P 2.77MM
P1107	6630VZS001C	CONNECTOR,DRAWING 36PIN
P1200A	6630B60F432	CONNECTOR ,32P 2.54MM
P1200B	6630B60F532	CONNECTOR ,32P 2.54MM
P201A	6630B60F432	CONNECTOR ,32P 2.54MM
P202A	6630B60F432	CONNECTOR ,32P 2.54MM
P300	6630GZ00724	CONNECTOR ,D-SUB 24P 1.91MM
RESISTOR		
AR1001	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1002	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1003	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1004	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1005	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1006	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1007	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1008	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1009	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1010	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1011	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1012	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1013	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1014	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1015	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1016	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1017	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1018	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1019	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1020	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1021	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1022	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1023	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1024	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1025	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR1026	0RR0472C62A	47 OHM 1 / 16 W 1608 5.00%
AR503	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AR504	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AR506	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%

REPLACEMENT PARTS LIST

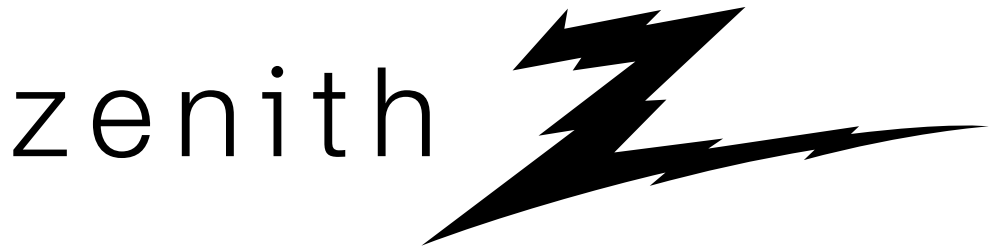
LOCA. NO	PART NO	DESCRIPTION
AR516	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AR518	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AR519	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AR522	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AR523	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AR526	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AR529	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AR530	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AR531	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AR744	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
AR746	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
AR748	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
AR750	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
AR846	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
AR847	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
AR848	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
AT1002	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1003	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1004	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1005	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1006	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1007	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1008	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1009	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1010	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1011	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1012	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1013	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1014	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1016	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1017	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1018	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1019	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1020	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1021	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1022	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
AT1101	0RRZVTA001D	22 OHM 1 / 16 W 1608 5%
R1	0RD0752F609	75 OHM 1/6 W 5.00%
R1286	0RN1002F409	10K OHM 1/6 W 1.00%
R2	0RD4703F609	470K OHM 1/6 W 5.00%
R3	0RD4703F609	470K OHM 1/6 W 5.00%
R4	0RD0752F609	75 OHM 1/6 W 5.00%
R5	0RD0752F609	75 OHM 1/6 W 5.00%
R53	0RD2200F609	220 OHM 1/6 W 5.00%
R54	0RD0102F609	10 OHM 1/6 W 5%
R722	0RF0331H609	3.3 OHM 1/2 W 5.00%
R724	0RF0331H609	3.3 OHM 1/2 W 5.00%
R800	0RKZVTA001B	4.7M OHM 1/2 W 5%
R810	0RD2204F609	2.2M OHM 1/6 W 5.00%
R811	0RD2204F609	2.2M OHM 1/6 W 5.00%
R812	0RD3302F609	33K OHM 1/6 W 5%
R813	0RD1002F609	10K OHM 1/6 W 5%
R814	0RN5603G409	560K OHM 1/4 W 1.00%
R815	0RN5103G409	510K OHM 1/4 W 1%

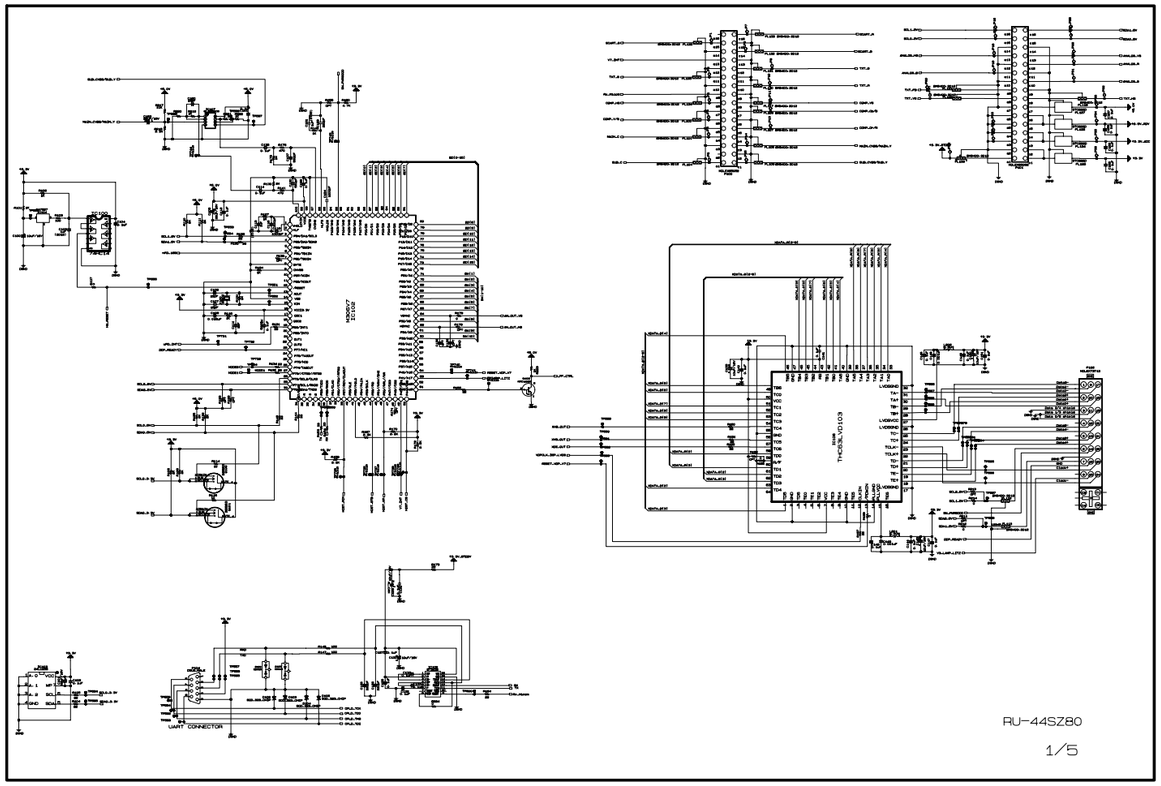
LOCA. NO	PART NO	DESCRIPTION
R816	0RN5103G409	510K OHM 1/4 W 1%
R817	0RN5103G409	510K OHM 1/4 W 1%
R818	0RD2202F609	22K OHM 1/6 W 5%
R819	0RD5602F609	56K OHM 1/6 W 5%
R820	0RD0102F609	10 OHM 1/6 W 5%
R821	0RD1003F609	100K OHM 1/6 W 5%
R823	180-A01P	0.13 OHM 2 W 5% RWR
R824	0RD2202F609	22K OHM 1/6 W 5%
R831	0RD0272A609	27 OHM 1/2 W(7.0) 5.00%
R832	0RD6802F609	68K OHM 1/6 W 5.00%
R833	0RD6801F609	6.8K OHM 1/6 W 5.00%
R834	0RD1000F609	100 OHM 1/6 W 5%
R835	0RD0152F609	15 OHM 1/6 W 5.00%
R836	0RD1001F609	1K OHM 1/6 W 5%
R837	180-A01H	2 W RW ROUND G 0.27 J TA31(63)
R838	0RD4300F609	430 OHM 1/6 W 5.00%
R839	0RD3001F609	3K OHM 1/6 W 5.00%
R840	0RD1000F609	100 OHM 1/6 W 5%
R841	0RS1003K607	100K OHM 2 W 5.00%
R842	0RD4700H609	470 OHM 1/2 W 5.00%
R843	0RD4700H609	470 OHM 1/2 W 5.00%
R844	0RD4702F609	47K OHM 1/6 W 5%
R845	0RD0302F609	30 OHM 1/6 W 5.00%
R850	0RN3303G409	330K OHM 1/4 W 1.00%
R851	0RD2001F609	2K OHM 1/6 W 5%
R852	0RN1802F409	18K OHM 1/6 W 1.00%
R854	0RN4701F409	4.7K OHM 1/6 W 1.00%
R855	0RD1501F609	1.5K OHM 1/6 W 5%
R856	0RD5100F609	510 OHM 1/6 W 5.00%
R857	0RD5100F609	510 OHM 1/6 W 5.00%
R865	0RD3601F609	3.6K OHM 1/6 W 5.00%
R866	0RD3901F609	3.9K OHM 1/6 W 5%
R867	0RD5100F609	510 OHM 1/6 W 5.00%
R868	0RN1201F409	1.2K OHM 1/6 W 1.00%
R872	0RN3303G409	330K OHM 1/4 W 1.00%
R873	0RD2703G609	270K OHM 1/4 W 5.00%
R874	0RN5101F609	5.1K OHM 1/6 W 5.00%
R875	0RD1002F609	10K OHM 1/6 W 5%
R876	0RD1001F609	1K OHM 1/6 W 5%
R877	0RD0391F609	3.9 OHM 1/6 W 5.00%
R891	0RD1002H609	10K OHM 1/2 W 5.00%
R892	0RS4700K607	470 OHM 2 W 5.00%
R893	0RS4700K607	470 OHM 2 W 5.00%
R894	0RD1001F609	1K OHM 1/6 W 5%
R895	0RN8201F409	8.2K OHM 1/6 W 1.00%
R896	0RN2201F409	2.2K OHM 1/6 W 1.00%
R897	0RD1001F609	1K OHM 1/6 W 5%
R898	0RKZVTA001B	4.7M OHM 1/2 W 5%
SWITCH		
SW01	140-275E	SWITCH,PUSH SPBS222EP011
SW1	140-313B	SWITCH,TACT 2LEAD 160G(TA)
SW2	140-313B	SWITCH,TACT 2LEAD 160G(TA)
SW3	140-313B	SWITCH,TACT 2LEAD 160G(TA)

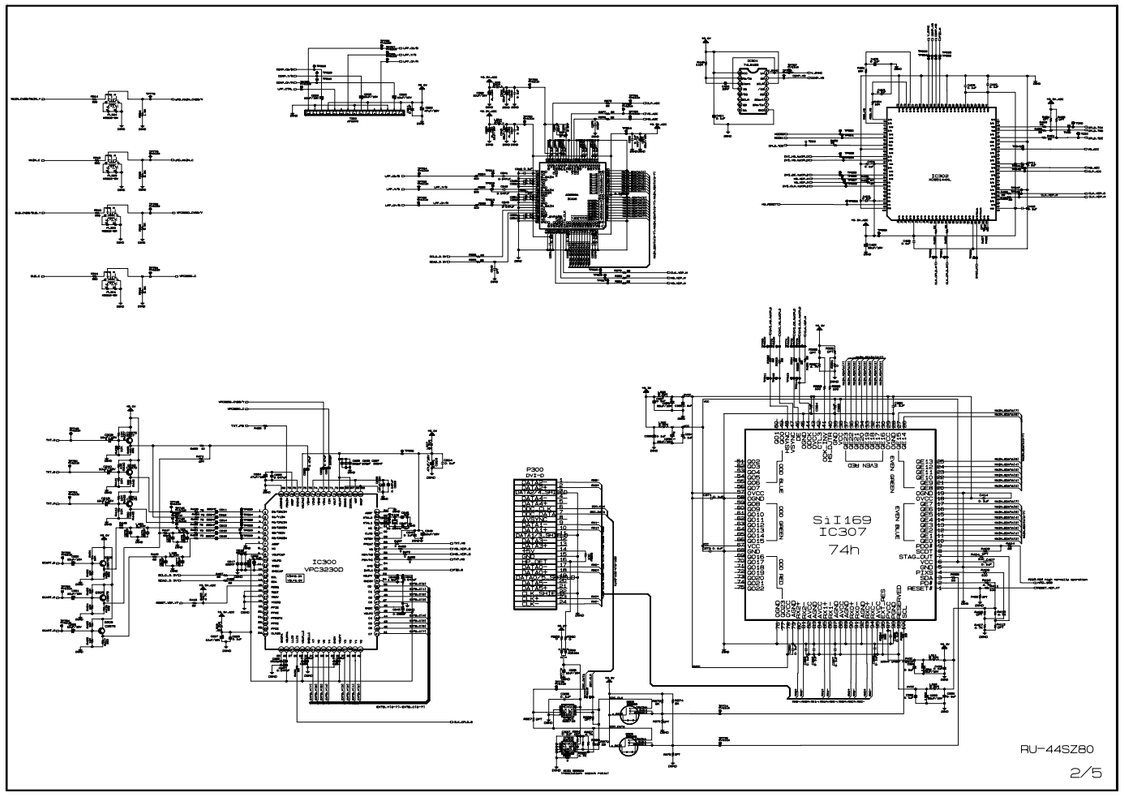
REPLACEMENT PARTS LIST

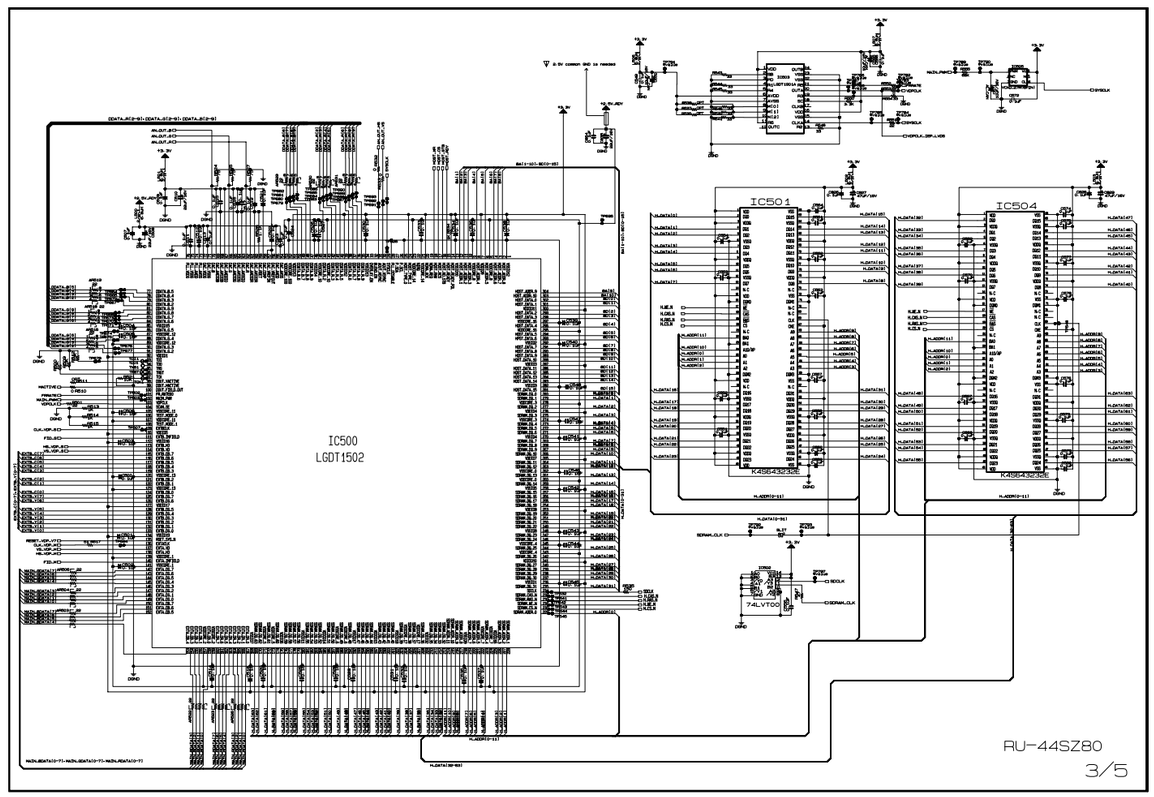
LOCA. NO	PART NO	DESCRIPTION
SW4	140-313B	SWITCH,TACT 2LEAD 160G(TA)
SW5	140-313B	SWITCH,TACT 2LEAD 160G(TA)
SW6	140-313B	SWITCH,TACT 2LEAD 160G(TA)
SW7	140-313B	SWITCH,TACT 2LEAD 160G(TA)
FILTER & CRYSTAL		
FB851	125-123A	FILTER,EMC FERRITE BFD3565R2F
FB861	125-123A	FILTER,EMC FERRITE BFD3565R2F
FB882	125-123A	FILTER,EMC FERRITE BFD3565R2F
FB891	125-123A	FILTER,EMC FERRITE BFD3565R2F
FL100	6200J000012	FILTER,EMC NFL21SP207X1C3
FL101	6200J000012	FILTER,EMC NFL21SP207X1C3
FL104	6200J000012	FILTER,EMC NFL21SP207X1C3
FL106	6200J000012	FILTER,EMC NFL21SP207X1C3
FL107	6200J000012	FILTER,EMC NFL21SP207X1C3
FL108	6200J000012	FILTER,EMC NFL21SP207X1C3
FL109	6200J000012	FILTER,EMC NFL21SP207X1C3
FL112	6200J000012	FILTER,EMC NFL21SP207X1C3
FL113	6200J000012	FILTER,EMC NFL21SP207X1C3
FL117	6200J000012	FILTER,EMC NFL21SP207X1C3
FL118	6200J000012	FILTER,EMC NFL21SP207X1C3
FL121	6200J000012	FILTER,EMC NFL21SP207X1C3
FL122	6200J000012	FILTER,EMC NFL21SP207X1C3
FL123	6200VJT006A	FILTER,EMC STC222D 50VOLT 4A 2200PF
FL124	6200VJT006A	FILTER,EMC STC222D 50VOLT 4A 2200PF
FL125	6200VJT006A	FILTER,EMC STC222D 50VOLT 4A 2200PF
FL127	6200VJT006A	FILTER,EMC STC222D 50VOLT 4A 2200PF
FL130	6200J000012	FILTER,EMC NFL21SP207X1C3
FL131	6200J000012	FILTER,EMC NFL21SP207X1C3
FL132	6200J000012	FILTER,EMC NFL21SP207X1C3
FL133	6200J000012	FILTER,EMC NFL21SP207X1C3
FL134	6200J000012	FILTER,EMC NFL21SP207X1C3
FL135	6200J000012	FILTER,EMC NFL21SP207X1C3
FL136	6200J000012	FILTER,EMC NFL21SP207X1C3
FL139	6200J000012	FILTER,EMC NFL21SP207X1C3
FL300	6200C000010	FILTER,B.P. H354LAI-K5202
FL301	6200C000010	FILTER,B.P. H354LAI-K5202
FL303	6200C000010	FILTER,B.P. H354LAI-K5202
FL304	6200C000010	FILTER,B.P. H354LAI-K5202
L801	6200JB8012T	FILTER,EMC SQE2828 17.2MH
L802	6200JB8012T	FILTER,EMC SQE2828 17.2MH
L803	150-F06U	FILTER,EMC SQE3535 27.5MH
P1	6210VH0004A	FILTER,EMC ZCAT3035-1330-M-K
P2	6210VH0004A	FILTER,EMC ZCAT3035-1330-M-K
T1001	6200VJT006A	FILTER,EMC STC222D 50VOLT 4A 2200PF
T1002	6200JB8009Q	FILTER,EMC SCR470R220
T1003	6200VJT006A	FILTER,EMC STC222D 50VOLT 4A 2200PF
T1004	6200VJT006A	FILTER,EMC STC222D 50VOLT 4A 2200PF
T1005	0LCCE00017A	FILTER,EMC HD-1M2012-301J 100MHZ
“	6200J000015	FILTER,EMC MLB-201209-0300A-N1 300 OHM
T1006	0LCCE00017A	FILTER,EMC HD-1M2012-301J 100MHZ
“	6200J000015	FILTER,EMC MLB-201209-0300A-N1 300 OHM
T1007	0LCCE00017A	FILTER,EMC HD-1M2012-301J 100MHZ
“	6200J000015	FILTER,EMC MLB-201209-0300A-N1 300 OHM

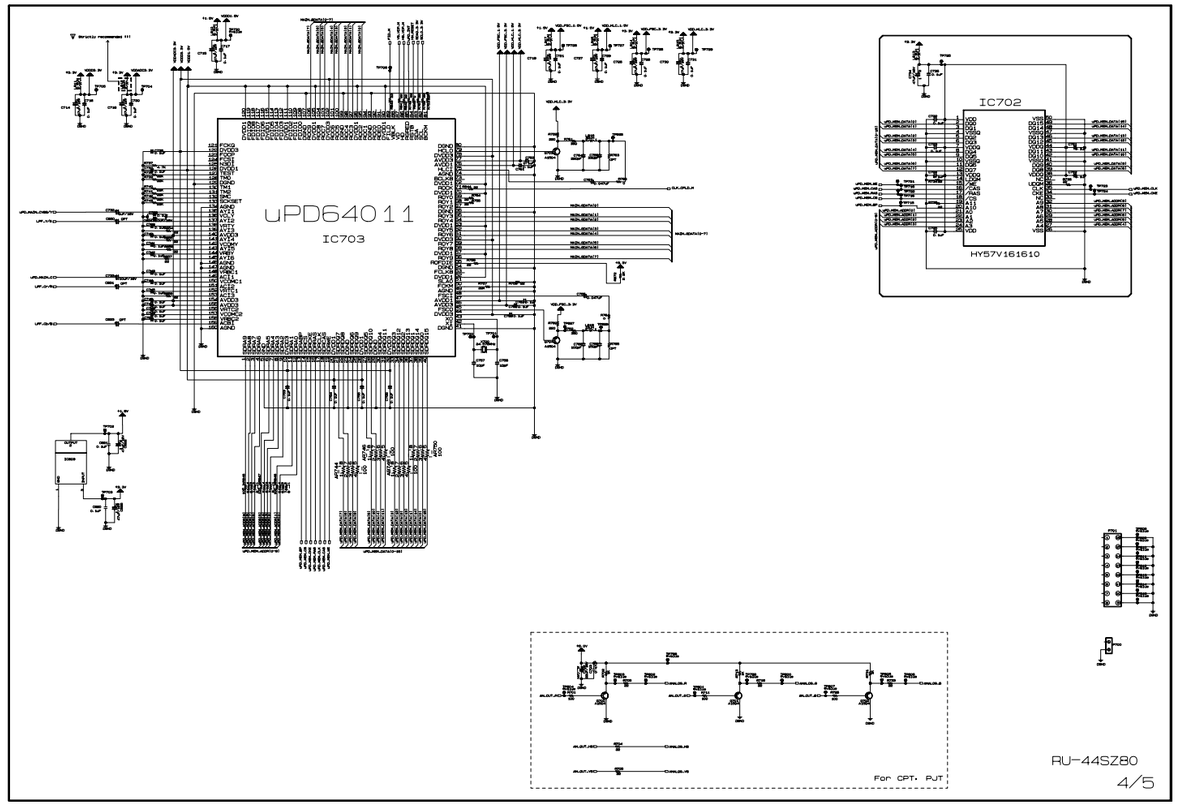
LOCA. NO	PART NO	DESCRIPTION
T1008	0LCCE00017A	FILTER,EMC HD-1M2012-301J 100MHZ
“	6200J000015	FILTER,EMC MLB-201209-0300A-N1 300 OHM
T1009	0LCCE00017A	FILTER,EMC HD-1M2012-301J 100MHZ
“	6200J000015	FILTER,EMC MLB-201209-0300A-N1 300 OHM
T1010	0LCCE00017A	FILTER,EMC HD-1M2012-301J 100MHZ
“	6200J000015	FILTER,EMC MLB-201209-0300A-N1 300 OHM
T1015	0LCCE00017A	FILTER,EMC HD-1M2012-301J 100MHZ
T1016	0LCCE00017A	FILTER,EMC HD-1M2012-301J 100MHZ
T1017	0LCCE00017A	FILTER,EMC HD-1M2012-301J 100MHZ
T1018	0LCCE00017A	FILTER,EMC HD-1M2012-301J 100MHZ
T1019	0LCCE00017A	FILTER,EMC HD-1M2012-301J 100MHZ
T1020	0LCCE00017A	FILTER,EMC HD-1M2012-301J 100MHZ
T300	0IZZVF0022D	FILTER,B.P. AFM118F6M00X1(AF-9424C)
T402	6200VJT006A	FILTER,EMC STC222D 50VOLT 4A 2200PF
T403	6200VJT006A	FILTER,EMC STC222D 50VOLT 4A 2200PF
T404	6200VJT006A	FILTER,EMC STC222D 50VOLT 4A 2200PF
X1	156-A01P	RESONATOR,CRYSTAL HC49U 8.000MHZ
X100	6212AB2015D	RESONATOR,CRYSTAL HC-49/SM 16MHZ
X1001	6202VDT002D	RESONATOR,CRYSTAL SX-1SMD 8.0MHZ
X102	6202VDT002E	RESONATOR,CRYSTAL SX-1SMD 20250000HZ
X1202	156-A01E	RESONATOR,CRYSTAL HC49U 4.000MHZ
X1203	6212BA2002C	RESONATOR,CERAMIC CSALA2M69G4ZF01-B0
X600	156-A02R	RESONATOR,CRYSTAL HC49U 18.432MHZ
X700	6212AB2806A	RESONATOR,CRYSTAL SX-1 24.576MHZ
MISCELLANEOUS		
F701	0FS5000B84B	FUSE,SLOW BLOW 500MA 250V
F800	0FS5001B51D	FUSE,SLOW BLOW 5000MA 250V
IC505	6204B60001B	OSCILLATOR,27MHZ +/- 100 PPM 3.3V
PA1	6726VH0001A	REMOTE CONTROLLER RECEIVER,38KHZ
TH801	163-048D	THERMISTOR,NTC KL15L2R5 +/- 15% 125V
TH802	163-048D	THERMISTOR,NTC KL15L2R5 +/- 15% 125V
TU100	6700NFNS06Q	TUNER,TAUD-H101F
TU101	6700NFNS06P	TUNER,TAFD-H101P
VA800	164-003K	VARISTOR,SVC621D-14A 620V 0%
ACCESSORIES		
A1	3828VA0465B	MANUAL,OWNERS MB042B
A2	6710V00102K	REMOTE CONTROLLER

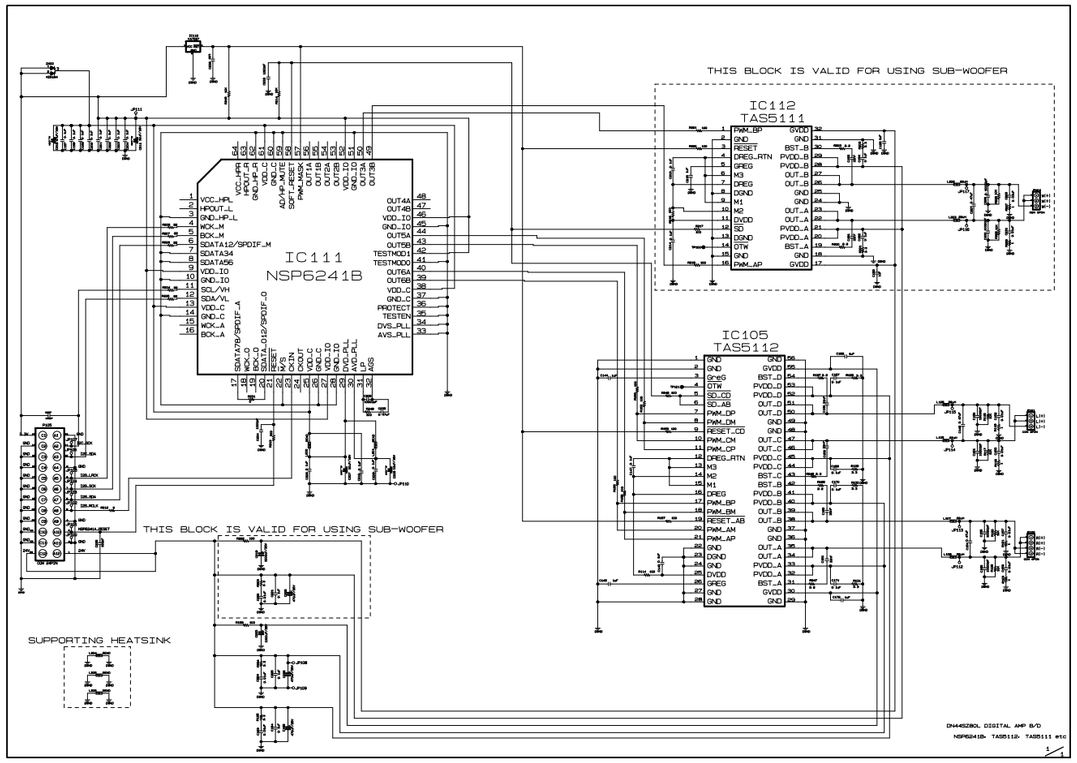

zenith

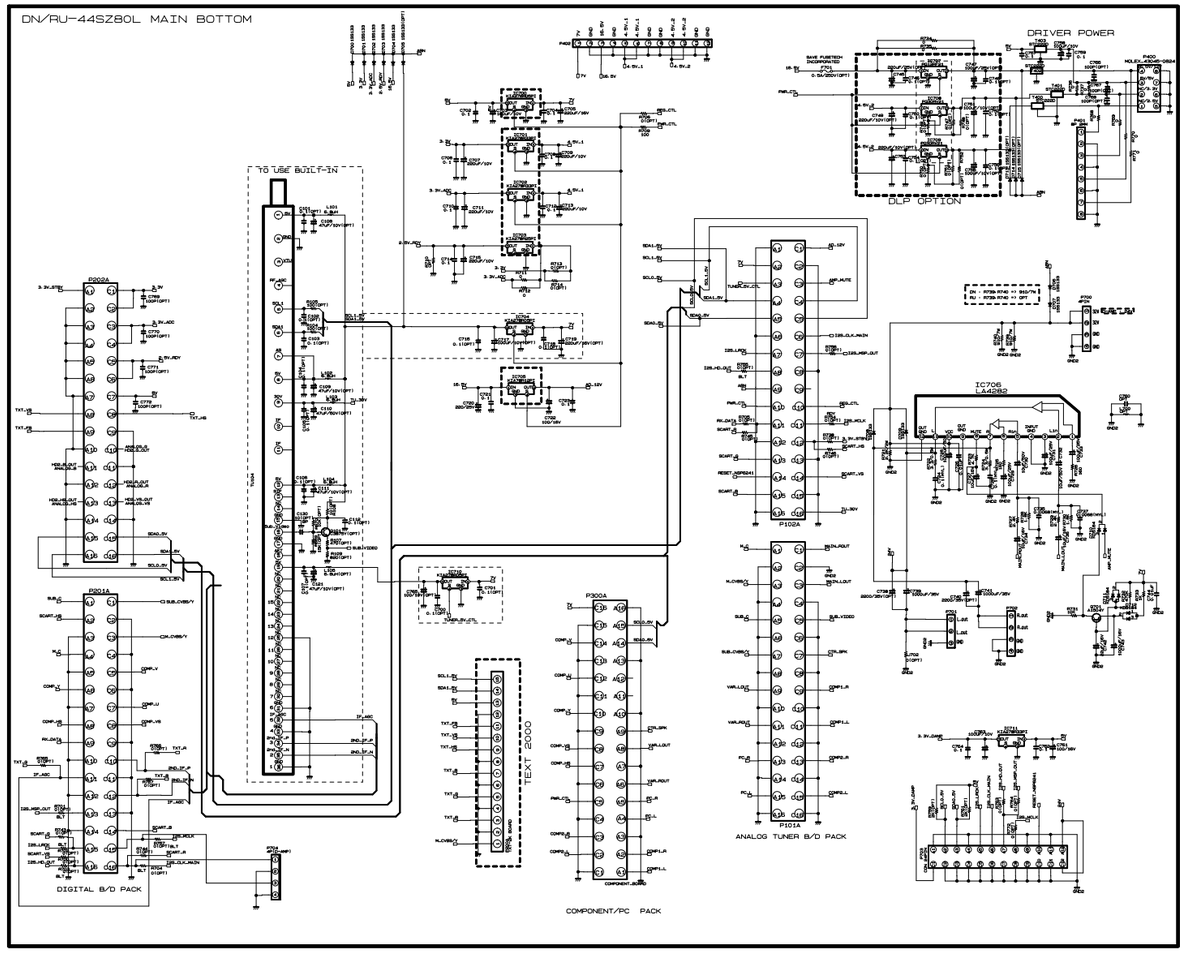

RU-44SZ80
1/5

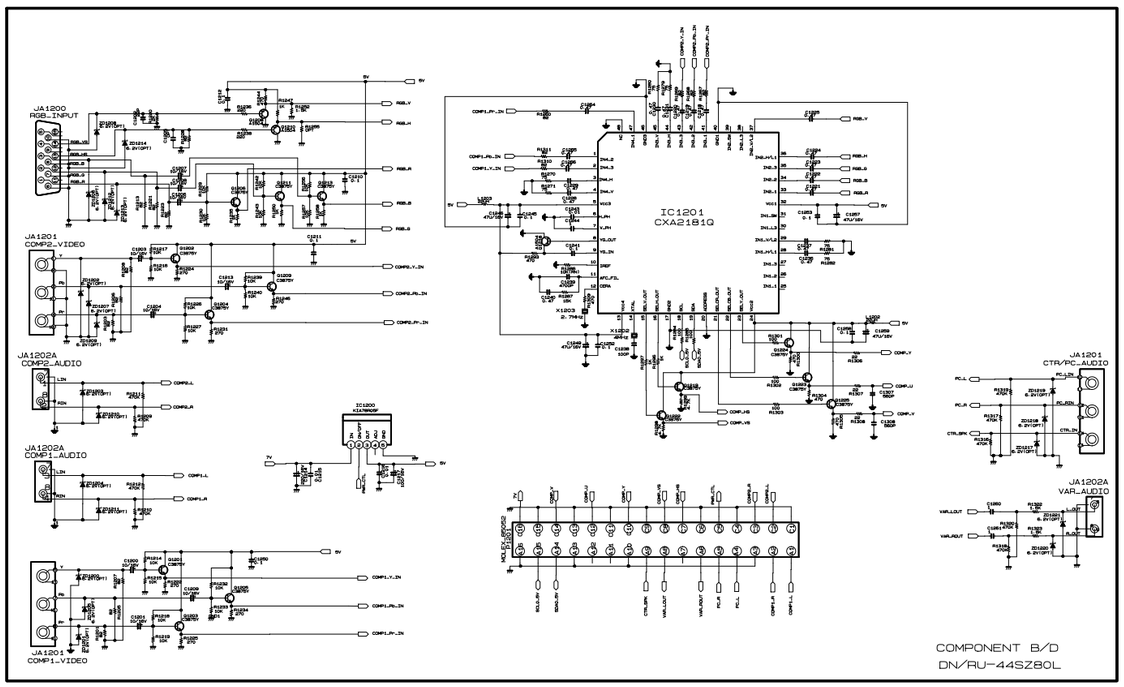

IC300
VPC3230D
SiI169
IC307
74h
RU-44SZ80
2/5

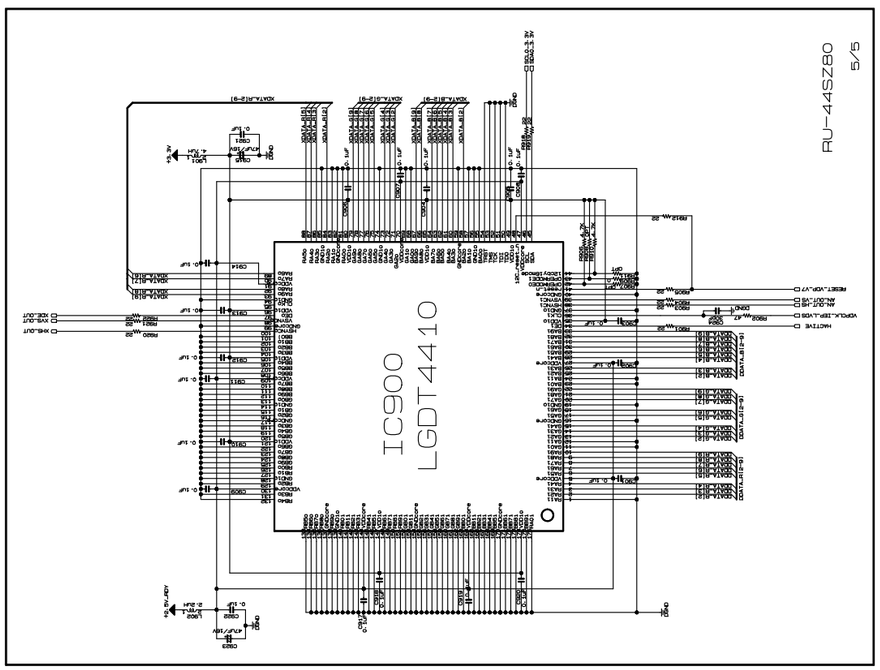

IC500
LGDT1502
IC501
IC504
74LVT00
RU-44SZ80
3/5

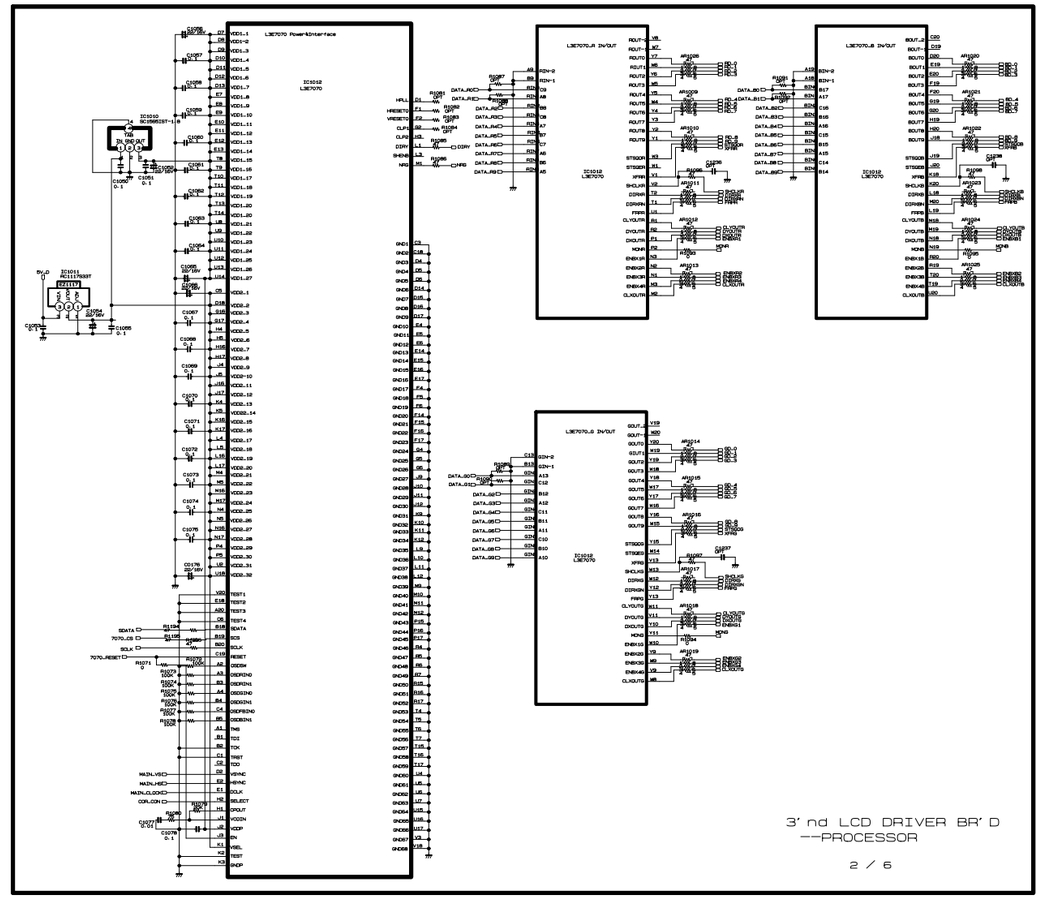

uPD64011
IC703
IC702
HY57V161610
For CPT, PJT
RU-44SZ80
4/5

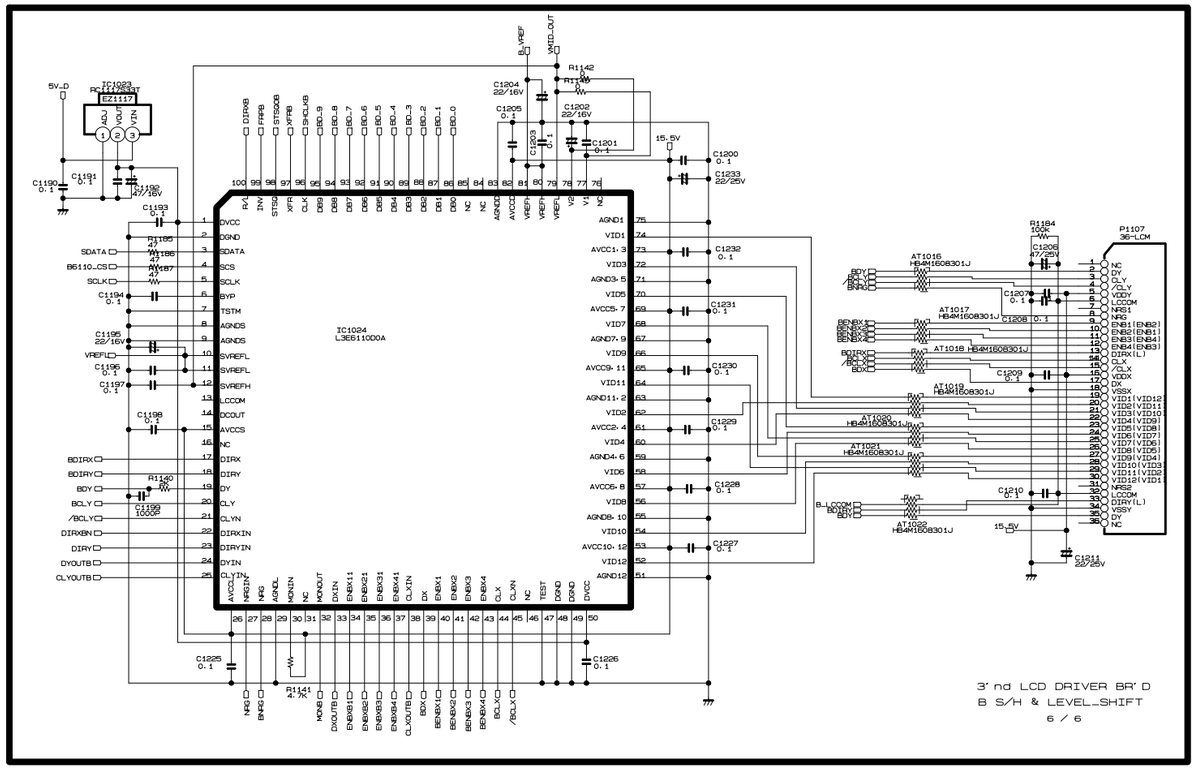

THIS BLOCK IS VALID FOR USING SUB-WOOFER
IC112
TAS5111
IC105
TAS5112
IC111
NSP6241B
THIS BLOCK IS VALID FOR USING SUB-WOOFER
SUPPORTING HEATSINK
DN4502BOL DIGITAL AMP B/D
NSP6241B- TAS5112- TAS5111 etc

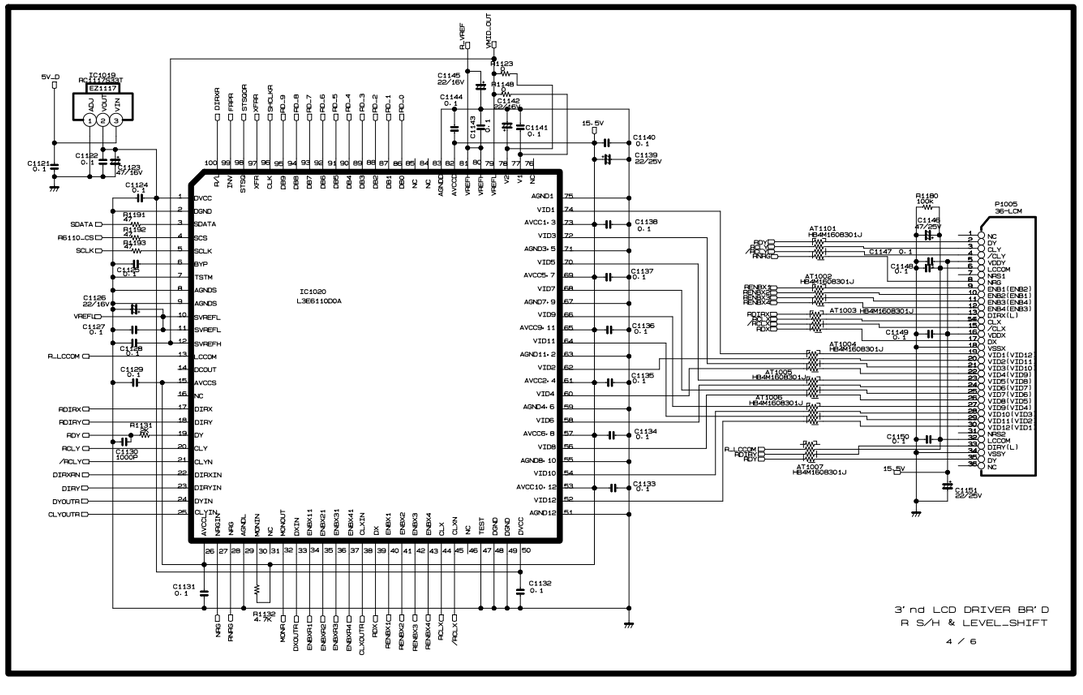

DN/RU-44SZ80L MAIN BOTTOM
DRIVER POWER
DLP OPTION
TO USE BUILT-IN
TEXT 2000
DIGITAL B/D PACK
ANALOG TUNER B/D PACK
COMPONENT/PC PACK

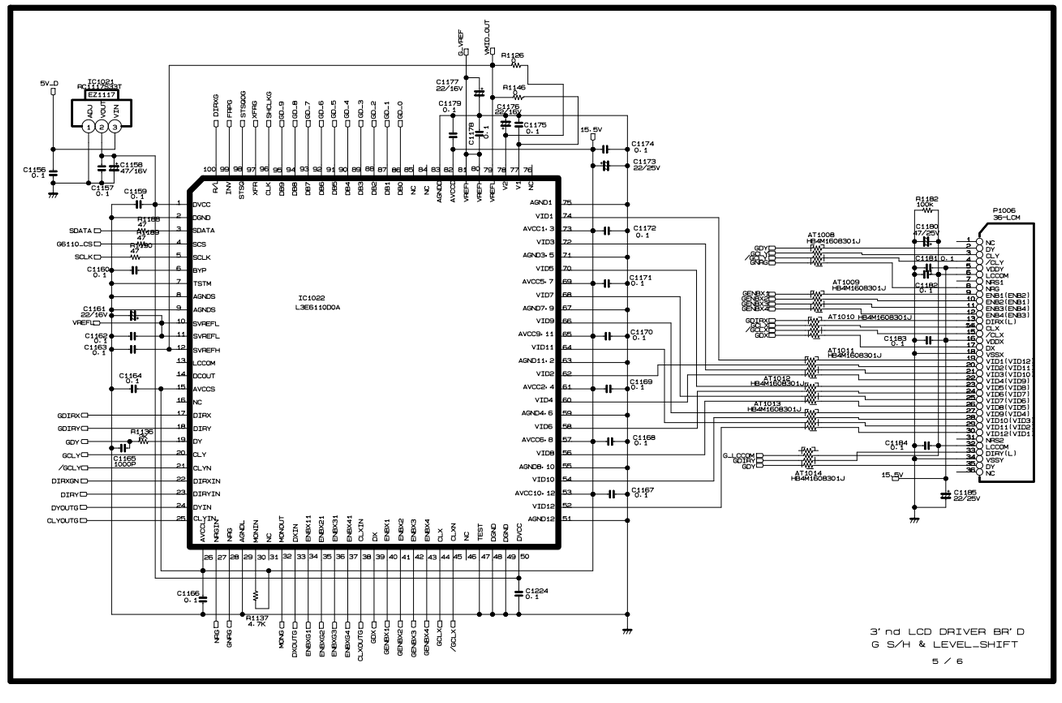

JA1200
RGB_INPUT
JA1201
COMP2_VIDEO
JA1202A
COMP2_AUDIO
JA1202A
COMP1_AUDIO
JA1201
COMP1_VIDEO
IC1201
CXA2181Q
JA1201
CTR/PC_AUDIO
JA1202A
VAR_AUDIO
COMPONENT B/D
DN/RU-44SZ80L


IC900
LGDT4410
RU-44SZ80
5/5


3' nd LCD DRIVER BR' D
--PROCESSOR
2 / 6


IC1024
L3EB11000A
3' nd LCD DRIVER BR' D
B S/H & LEVEL_SHIFT
6 / 6


IC1020
L3E6110D0A
3' nd LCD DRIVER BR' D
R S/H & LEVEL_SHIFT
4 / 6


IC1022
L3E6110D0A
3' nd LCD DRIVER BR' D
G S/H & LEVEL_SHIFT
5 / 6

AC INPUT LINE FILTER BOARD

MAIN SWITCH BOARD (ONLY DOMESTIC MODEL)

MODEL DN(RU)-44SZ80L

SCHASSIS NB - 042A/B/C

lightning GND P804 / P805 lightning GND

85 ~ 264V

F800 T5AL/125V or 250V

VA800 SVC621D-14A

C801 0.22U/275V 6200JB8012T

L801 L802 6200JB8012T

P806 BLACK P807 WHITE

P805 P801 470K/0.5W SW801 C806 0.22U/275V P806

TO TUNER_BOARD P841

POWER ON
ST-6.5V
GND
GND
FAN-7.5V (FAN-6V_built-in)
FAN-ON

(FOR UL/CSA) TH801 163-046D NT-101 P803A P803B TH802 163-046D P801

C803 0.22U/275V C807 1000PF 2KV C805 1U/500V(WPP) T801 6170VMCA065 PM236S

(* FM336S for UL/CSA)

C804 ED01C

IC870_REF

R818 22K C815 100PFF R819 56K

R811 2.2M R810 2.2M

Q801 STK20N45OZ FB801 C801 820PF

R821 100K R820 10 R835 0 R834 100 C823 0.13/2W C814 470PF 50V R826 0

IC810 SMA E1017

ZCD Startup PFB_OVP PFC_OUTPUT CS Mult_FP DD_OUTPUT DCP GND COMP D_FB BD Vcc

R812 33K C810 0.01UF C811 0.047UF R813 10K R840 100 C834 0.1UF 50V C812 0.47UF C833 10PF

C820 - 330U/450V unstable area C820 470PF/2KV C830 220U/450V

Q830 STRW6262ZF R836 1K R835 15

R837 0.27/2W C816 1000PF 50V

R831 2.2 D832 EU1AV D831 EU1AV

R838 430 R839 2.2K R832 68K

Q832 KTC3227 ZD839 MTZJ27 C831 47UF 50V R833 6.8K

R842 470 0.5W R843 470 0.5W

Q871 KTA1024 R875 1K R876 1K R877 10K C874 4.7UF 50V

C870 0.1UF C840 0.1UF IC870 KA431 Q840 KTC3227 C840 0.1UF D840 1N4148

T830 6170VMCA13T (for north america model / UL/CSA) 6170VMCA13U (for domestic model / KS)

GND 4V_DLP FB871 C873 470PF L871 FML-G22S C871 3300UF 16V C872 470UF 16V

GND SOUND FB891 C893 470P D891 FML614S L891 150-C02F C891 1000UF 50V C892 220UF 50V

4V_DIG FB881 D881 D4L20U C883 470P L881 150-C02F C881 2200U 16V C882 470U 16V

GND 5V FB861 C863 470P D861 D4L20U L861 150-C02F C861 2200UF 25V C862 470UF 16V

16.5V FB851 D851 D4L20U C853 470P R852 R853 C852 220UF 25V

GND

built-in ready R892 10K

TO MAIN_BOARD P832A

32V_SND (32V_built-in)
32V_SND (32V_built-in)
GND

TO MAIN_BOARD P821A

16V
GND
16.5V
GND
4.0V_DIG
4.0V_DIG
GND
4.0V_DLP
4.0V_DLP
GND
GND

IC850 KIA78R02API R895 8.2K =>11K for UL/CSA D838 1N4148 R894 100 C841 0.1UF R896 2.2K

C836 1000PF R841 100K R874 5.1K R824 22K C813 100PF

TO_Ballast P820 GND 380V

R850 330K R872 330K R873 270K R814 560K R815 510K R816 510K R817 510K

R855 1.2K IC830 PC817XF3 R851 2K R854 5.1K RN =>4.7K for built-in R853 0 => 100 for built-in R852 15K RN R866 3.9K R856 470 RN R868 1.0K RN =>820 for UL/CSA R865 27K Q852 KSC945C-Y R857 62K R867 620K

IC851 KA431 C857 1UF 25V

C898 3300PF 4KV C899 470PF 4KV R898 10K 1/2W

ST-BY => LOW
POWER -ON => HIGH

TUNER_PACK(3/2)
DN/RU-44SZ80L

P1 6PIN P2 10 PIN DIP P3 3PIN(OPT) INDEX OPTION

JP60 JP61 JP62 JP63 JP64 JP65 JP66 JP67 JP68

ST_5V SDA3_5V SCL3_5V AD_15V

FAN_PWR FAN_ON PWR_CTL

D3 KDS184 ST POW IC3 PQ05RF21 C20 100/25V C18 0.1UF C22 0.01 C23 100/16V

FOR USA COMMERCIAL IC2 KIA78R33API C24 47/16V C26 0.01 C25 0.01 C27 47/16V 3.3V_STBY

IC6 AT24C08N R1 R2 100 C2 0.01 22/16V SDA3_5V SCL3_5V

M37151 IC1

C8 0.01 C7 220/16V C4 0.1 C18 0.1 C9 220P C5 1/50V C6 0.1 C19 0.1 C10 0.1 C11 0.1 C12 0.1 C13 0.1 C14 0.1 C15 1/50V C16 20P C17 20P X3 8MHZ X4 4MHZ

R30 R31 1K R32 R33 4.7K R34 R35 R36 R37 R38 R39 R40 R41 R42 R43 R44 R45 R46 R47 R48 R49 4.7K R50 R51 R52 R53 R54 R55 R56 R57 R58 R59 R60 R61 R62 R63 R64 R65 R66 R67 R68 R69 R70 R71 R72 R73 R74 R75 R76 R77 R78 R79 R80 R81 R82 R83 R84 R85 R86 R87 R88 R89